

# **RealTimeToDB**

**Version 4.12, November 9, 2016**

**User's Manual**

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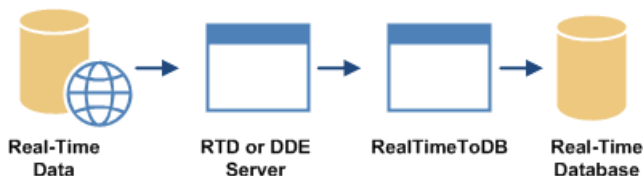
## Getting Started

RealTimeToDB is a powerful tool for **updating databases with real-time data from RTD and DDE servers**.

The traditional usage of RTD and DDE servers is updating real-time data in Microsoft Excel like this:



RealTimeToDB allows getting real-time data from RTD or DDE servers and saving the data into databases like this:

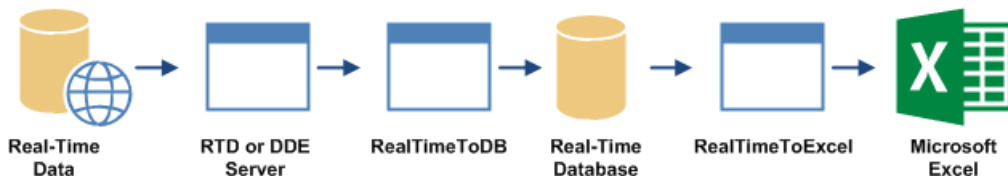


As a result, you may get **the required data for stocks, options, futures, and currency pairs in required time frames**.

RealTimeToDB includes **ready-to-use databases** for supported database platforms and several real-time data providers.

RealTimeToDB supports: Microsoft SQL Server, Microsoft SQL Server Compact, MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL.

RealTimeToExcel, an integrated companion product, allows **updating real-time data from databases in Microsoft Excel** like this:

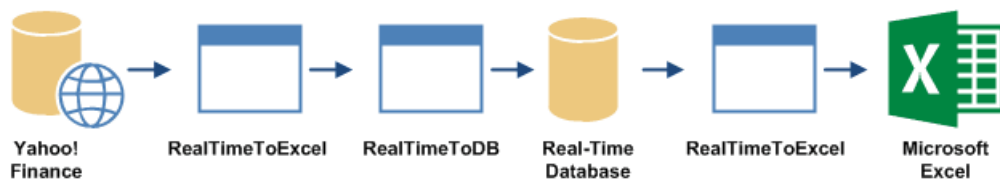


This approach delivers additional benefits:

- You may use real-time and historical data in the same manner.
- You may combine and use data from different data sources in the same manner.
- You may replace complicated DDE formulas in Microsoft Excel to regular RTD formulas.

Using RealTimeToExcel, you may also get delayed **quotes and financial data from Yahoo! Finance, Google Finance, and MSN Money**.

As a result, you may start using the following process in a couple of minutes even without having a trading platform:



You may start learning about RealTimeToDB on the following topics:

- [Using RealTimeToDB](#)
- [Edition Comparison](#)
- [User Interface](#)
- [Application Configuration](#)
- [Database Configuration](#)
- [RTD Database](#)

## RealTimeToDB Edition Comparison

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RealTimeToDB allows updating databases with real-time data from RTD and DDE servers.

This is a powerful feature as you may get the required data in required time frames for building and testing various models.

Feature	Personal	Standard	Enterprise
Number of RTD and DDE servers per instance	2	Unlimited	Unlimited
Number of updated databases per instance	2	5	Unlimited
Number of updated tables per instance	10	15	Unlimited
Number of updated rows per table	500	1000	Unlimited
Default x86 and x64 instances	✓	✓	✓
Custom name instances	✗	✗	✓
Last value, day, time, and tick history tables	✓	✓	✓
Multi-threading	✓	✓	✓
Low latency	✓	✓	✓
32-bit and 64-bit RTD servers	✓	✓	✓
Microsoft SQL Server	✓	✓	✓
Microsoft SQL Server Compact	✓	✓	✓
Oracle MySQL	✓	✓	✓
SkySQL MariaDB	✓	✓	✓
Oracle Database	✓	✓	✓
IBM DB2	✓	✓	✓
NuoDB	✓	✓	✓
PostgreSQL	✓	✓	✓
Private traders and investors	✓	✓	✓
Professional traders and institutional investors	✗	✓	✓
Commercial use	✗	✓	✓

Tested RTD servers:

- FutureSource, eSignal.
- RealTimeToExcel (former Gartle RTD Server), Gartle Technology Corporation.

Tested DDE servers:

- ThinkDesktop, Thinkorswim, a division of TD Ameritrade.
- Trader Workstation, Interactive Brokers.
- VertexFX Trader, Hybrid Solutions.

## Install and Uninstall

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### Installing RealTimeToDB

To install RealTimeToDB, unzip the downloaded RealTimeToDB package and run setup.exe.

### Updating RealTimeToDB

A standard way to update the product is to run setup.exe of a new version without uninstalling the current product.

### Uninstalling RealTimeToDB

To uninstall RealTimeToDB, open **Control Panel, Program and Features**, then select RealTimeToDB and click the Uninstall button.

### Upgrading from RealTimeToDB 3.x to 4.0

Previous versions of the RealTimeToDB Personal, Standard or Enterprise editions may be upgraded for free. Additional actions are not required.

Previous versions of the RealTimeToDB Express edition are converted to a new trial version with a 30 day period. After that period, you may purchase and register RealTimeToDB Personal, Standard or Enterprise, or uninstall RealTimeToDB 4.0 and install the previous version.

In the last case, if the previous version was registered, you may continue to use it without additional actions.

### Installing and Uninstalling RTD Databases

The RealTimeToDB setup package includes preconfigured databases for supported database servers.

You may install a new database in a couple of minutes.

See details in the [RTD Database](#) topic.

## What's New

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### Version 4.12, November 9, 2016

#### Improvements:

- Updated RealTimeToExcel 4.12.

### Version 4.11, November 2, 2016

#### Improvements:

- Updated RealTimeToExcel 4.11.

#### Fixed Bugs:

- Fixed possible issues with getting data from Thinkorswim Desktop.  
Below are stable settings for the tos.rtd server:

```
<add key="tos.rtdMaxUpdateRows" value="1000"/>
<add key="tos.rtdMinUpdateTime" value="10000"/>
<add key="tos.rtdMaxUpdateTime" value="20000"/>
<add key="TosIsDynamicCalls" value="False"/>
<add key="NoDataLimit" value="120"/>
```

If you have no Microsoft Excel installed, change TosIsDynamicCalls to True.

### Version 4.10, September 9, 2016

#### Improvements:

- Updated RealTimeToExcel 4.10 with updated providers and examples.

### Version 4.9, July 27, 2016

#### Improvements:

- Updated RealTimeToExcel 4.9 with updated providers and examples.

### Version 4.8, July 19, 2016

#### Improvements:

- Updated RealTimeToExcel 4.8 with updated YahooFinanceKeyStatistics, YahooFinanceSummary, and YahooFinanceIndustries providers.

### Version 4.7, July 13, 2016

#### Improvements:

- Updated RealTimeToExcel 4.7 with updated YahooFinanceOptions provider.

### Version 4.6, June 21, 2016

RealTimeToDB and RealTimeToExcel have a new product website, [www.stock-data-solutions.com](http://www.stock-data-solutions.com).

#### Improvements:

- Updated RealTimeToExcel 4.6 has the same trial period in 30 days.

### Version 4.5, April 20, 2016

#### Improvements:

- RealTimeToExcel 4.5 is included.



## Version 4.4, April 14, 2016

### Improvements:

- RealTimeToExcel 4.4 is included.

## Version 4.3, March 15, 2016

### Improvements:

- RealTimeToExcel 4.3 is included.

### Bug Fixes:

- Fixed issues with installing on Windows XP.

## Version 4.2, February 5, 2016

### Improvements:

- Improved logging.

### Bug Fixes:

- Fixed stability issues with Thinkorswim and other RTD servers.
- Fixed stability issues with Trader Workstation and other DDE servers.

## Version 4.1, November 11, 2015

### New Features

- RealTimeToDB can check task changes and reload tasks automatically.  
For example, you may insert new stocks into the rtd.QuoteListStocks table from your applications and RealTimeToDB starts updating data. Specify the check interval in milliseconds in the RefreshTaskInterval application setting in RealTimeToDB.exe.config:  
<add key="RefreshTaskInterval" value="5000"/>

### Improvements

- RealTimeToExcel 4.1 is included. The new version supports Microsoft Excel 2016.

## Version 4.0, October 20, 2015

### Licensing Changes

RealTimeToDB End User License Agreement has been changed:

- **The free RealTimeToDB Express edition has been removed.**
- Starting RealTimeToDB 4.0 you may purchase and register RealTimeToDB Personal, Standard and Enterprise editions only.
- During a 30 day trial period you may test all the features of the RealTimeToDB Enterprise edition.

**You may continue to use previously registered versions of RealTimeToDB Express for free forever.**

**Registering RealTimeToDB Express of previous versions for new PC will be removed on December 1, 2015.**

*Please keep your registration email with the activation code to have a possibility to reinstall and activate RealTimeToDB Express on a registered PC.*

*You may check your registration email and register once again before December 1, 2015. Do this using the previous versions.*

### Upgrade Notes

- Previous versions of the RealTimeToDB Personal, Standard or Enterprise editions may be upgraded for free. Additional actions are not required.
- Previous versions of the RealTimeToDB Express edition are converted to a new trial version with a 30 day period. After that period, you may purchase and register RealTimeToDB Personal, Standard or Enterprise, or uninstall RealTimeToDB 4.0 and install the previous version.  
In the last case, if the previous version was registered, you may continue to use it without additional actions.

## **Download Package Changes**

- You may install RealTimeToDB only a separate package.  
The SaveToDB Suite package is not available more.  
You may continue to use SaveToDB Wizard Tools for working with separately installed products.

# System Requirements

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## Tested RTD Servers

- FutureSource, eSignal
- RealTimeToExcel (former Gartle RTD Server), Gartle Technology Corporation

## Tested DDE Servers

- ThinkDesktop, Thinkorswim, division of TD Ameritrade
- Trader Workstation, Interactive Brokers
- VertexFX Trader, Hybrid Solutions

## Supported Architectures:

- x86
- x64

## Supported Operating Systems:

- Windows XP SP3, Vista SP1, 7, 8, 8.1, 10
- Windows Server 2003 SP3, 2008, 2008 R2, 2012, 2012 R2

## Supported Versions of Microsoft SQL Server:

- Microsoft SQL Server 2005, 2008, 2008 R2
- Microsoft SQL Server 2012, 2014 including Express LocalDB
- Microsoft Azure SQL Database

## Supported Versions of Microsoft SQL Server Compact:

- Microsoft SQL Server Compact 3.5, 4.0

## Supported Versions of Oracle Database:

- Oracle Database 10g Release 1, Release 2
- Oracle Database 11g Release 1, Release 2
- Oracle Database 12c Release 1

## Supported Versions of IBM DB2:

- IBM DB2 9.5, 9.7, 10.1

IBM DB2 .NET Provider, IBM DB2 OLE DB Provider or IBM DB2 ODBC driver installed is required.

## Supported Versions of MySQL:

- MySQL 5.0, 5.1, 5.2, 5.5, 5.6

## Supported Versions of SkySQL MariaDB:

- MariaDB 5.1, 5.2, 5.3, 5.5, 10.0

All application features for MySQL are completely compatible with MariaDB.

ADO.Net Driver for MySQL and MySQL ODBC drivers can be used to connect to MariaDB.

MariaDB ODBC Driver 1.0 is not supported.

## Supported Versions of NuoDB:

- NuoDB 2.0.4, 2.2

## Supported Versions of PostgreSQL:

- PostgreSQL 9.0, 9.1, 9.2, 9.3, 9.4

# End-User License Agreement

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# Using RealTimeToDB

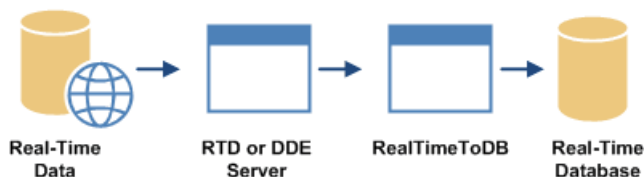
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## Installing Application

See details in the [Install and Uninstall](#) topic.

## Configuring Application

RealTimeToDB allows getting real-time data from RTD or DDE servers and saving the data into databases like this:



As you can see, RealTimeToDB must know what data to get and where to save.

RealTimeToDB can have multiple running instances.

Connection strings in [application configuration files](#) define databases to update for each instance.

[Field configuration tables](#) in databases define source real-time servers, target database tables, and formulas to update table columns with real-time data.

[Table configuration tables](#) in the databases allow tuning loading ticker lists, tables per instances, and temporary disabling certain tables.

## Configuration Steps

1. Create database tables for real-time data.
2. Create RealTimeToDB [configuration database tables](#).
3. Create configurations for real-time data tables.
4. Edit the [application configuration](#) file.

## Ready-To-Use Databases

The RealTimeToDB setup package includes preconfigured [RTD databases](#) for supported database platforms.

Use it to create databases quickly and test working.

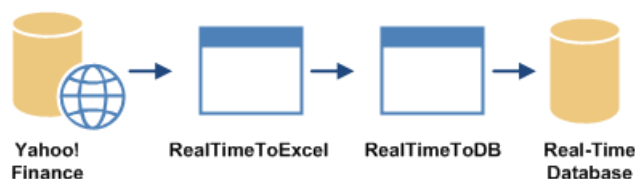
RealTimeToDB includes preconfigured and activated by default the Microsoft SQL Server Compact **rtd.sdf** database.

You may start getting real-time data for personal use immediately after install.

## Real-Time Data Providers

You may use RTD and DDE servers from your trading applications or real-time data providers like eSignal.

RealTimeToDB includes a companion product, RealTimeToExcel, that can be used as an RTD server for getting data for stocks, options, and currencies from Yahoo! Finance, Google Finance, and MSN Money.



The [RTD database](#) includes preconfigured tables for several real-time data providers including RealTimeToExcel.

## Database Platforms

RealTimeToDB supports:

- Microsoft Azure SQL Database
- Microsoft SQL Server including Express LocalDB

- Microsoft SQL Server Compact
- SkySQL MariaDB
- Oracle MySQL
- Oracle Database
- IBM DB2
- NuoDB
- PostgreSQL

Installed IBM DB2 .NET Provider, IBM DB2 OleDb Provider or IBM DB2 ODBC driver is required for working with IBM DB2 databases.

Other platforms are supported by default using the embedded providers.

## Running Application

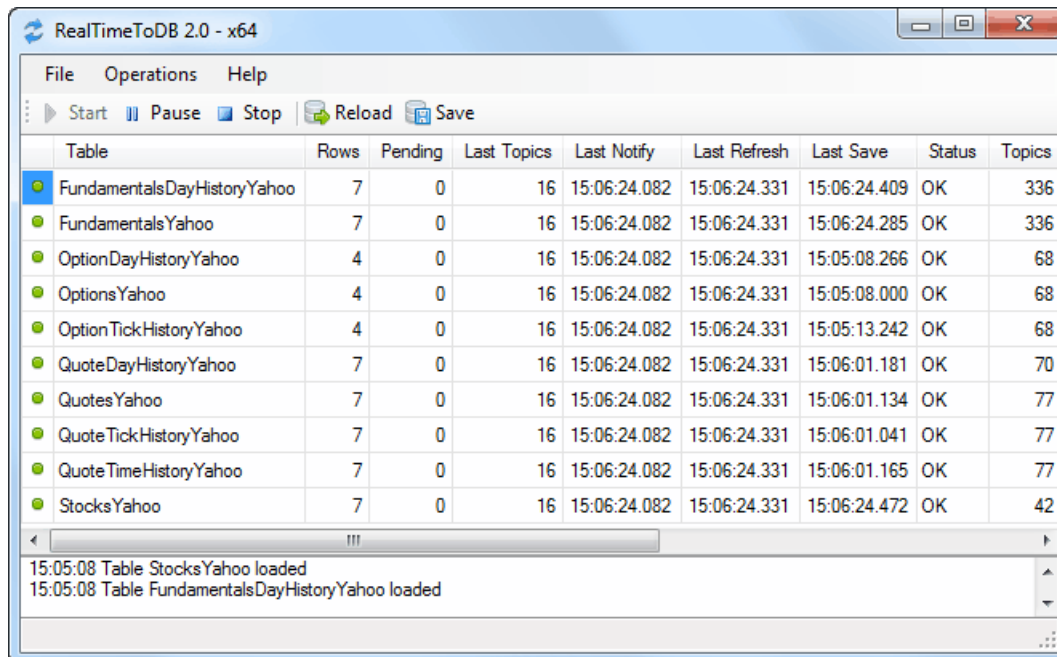
### Starting Steps

1. Start required RTD or DDE servers.
2. Start the RealTimeToDB application.
3. [Start](#) updating data.

You may start multiple instances of RealTimeToDB. The default instance names are **x86** for the 32-bit and **x64** for 64-bit executables.

### Operating and Monitoring

The main application form allows performing service operations and monitoring services.



The application can be minimized to the System Tray.

### Reloading Ticker Lists

RealTimeToDB loads database data on starting and updates the data in real-time.

If you have modified the database data that should be updated, click the [Reload](#) button.

## Getting Real-Time Data from Databases into Microsoft Excel

RealTimeToExcel, a companion product, allows getting real-time data from databases into Microsoft Excel.



Click the **Help, RealTimeToExcel, Help** menu item for details.

The [RTD Database](#) contains preconfigured [views with real-time formulas](#).

## Registering Application

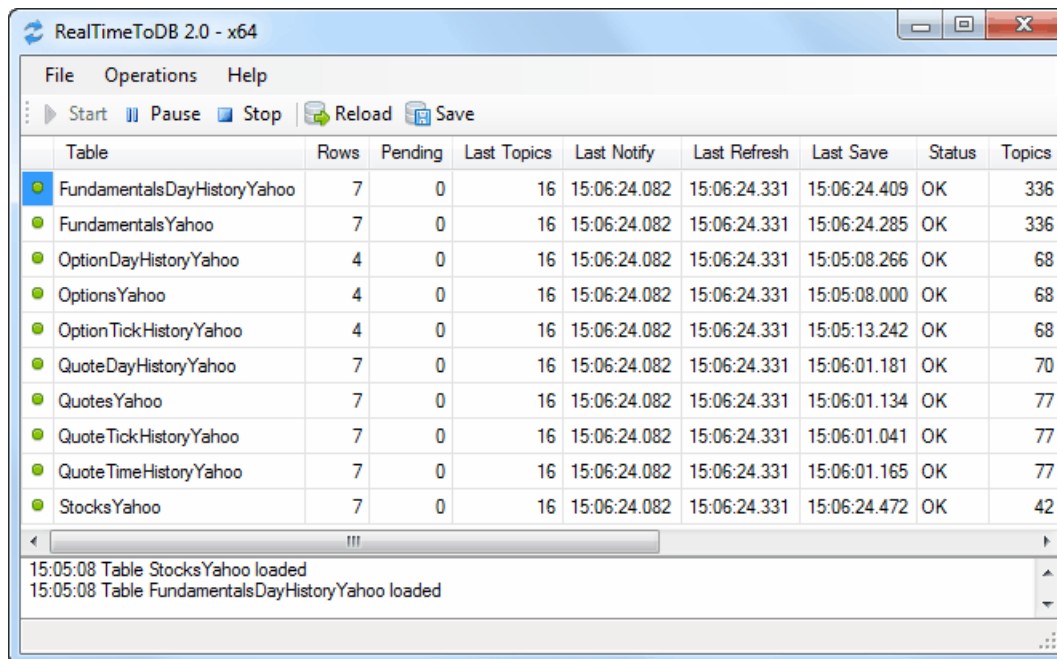
RealTimeToDB has several [editions](#) with different features.

Use the **Help, Register Product** menu item to [register the product](#).

## User Interface

RealTimeToDB is a Windows application.

The main application form allows performing service operations and monitoring services.



See the following topics about user interface elements:

- [Menu File](#)
- [Menu Operations](#)
- [Menu Help](#)
- [Menu RealTimeToExcel Help](#)
- [Table Columns](#)

## Menu File

### Open Configuration File

Opens the **RealTimeToDB.exe.config** file. You may check or edit [application settings](#).

### Open Connection Manager

Opens [Connection Manager](#) to edit connection strings in visual mode.

### Open Data Provider Manager

Opens [Data Provider Manager](#) to edit RealTimeToExcel data provider settings like working hours, refresh intervals, etc.

### Exit



Stops all the running services and closes the application.

## Menu Operations

### Start Services

Starts updating databases with real-time data.

### Pause Services

Stops the timer that starts updating databases.

Use this button to stop updating temporarily. To start updating, click the Start button.

### Stop Services

Stops all the running services.

### Reload Database Data

Saves current data to databases and reloads data from databases.

Use this button to reload data when you add new tickers to database tables.

### Save Data To Database

Saves current data to databases immediately.

Use this button, if the services have been paused, or you need to update the data before the next timer event.

## Menu Help

### Help

Displays the local help.

### Online Help

Opens the online help web page.

### Technical Support

Opens the support web page.

### RealTimeToDB Website

Opens the product web page at the official website.

### Register Product

Displays the **Register Product** wizard.

### Buy License

Opens the web page to start purchasing.

### Check Updates

Opens the web page to download updates.

### About RealTimeToDB

Displays the **About RealTimeToDB** dialog box.

## Menu RealTimeToExcel Help

The menu contains links for integrated RealTimeToExcel.

### Help

Displays the local RealTimeToExcel help.

### Online Help

Opens the online RealTimeToExcel help web page.

### Register Product

Displays the **Register Product** wizard for registering RealTimeToExcel.

## Table Columns

### Status Image

The image indicates table status: green or red.

**Table**

The column displays database table name.

**Rows**

The column displays loaded row count.

**Pending**

The column displays the amount of pending rows.

**Last Topics**

The column displays the amount of topics that the real-time server returns on the last data refresh.

**Last Notify**

The column displays the time of the first data change notification from the real-time server after the last data refresh.

**Last Refresh**

The column displays the start time of the getting changed data from the real-time server.

The period between the notification and getting the changed data depends on the RefreshTimeInterval value.

**Last Save**

The column displays the time when the last data have been saved to a database.

The period between the notification and this time shows the maximum delay for real-time data in a database.

**Status**

The column displays the status of real-time server and database operations.

**Topics**

The column displays the amount of topics connected to the real-time server.

Usually, this is the row count multiplied by real-time column count.

**MSPR**

The column displays average speed of saving data to a database in milliseconds per row (MSPR).

**ProgID**

The column displays RTD server ProgIDs or DDE service names.

**Server**

The column displays database servers.

**Database**

The column displays database names.

# Application Configuration

RealTimeToDB loads application settings from the **RealTimeToDB.exe.config** file at the application start.

You may edit this XML file using notepad.exe or another tool. Use the **File, Open Configuration File** menu item to open the file.

You may edit the connection strings using the Connection Manager. Use the **File, Open Connection Manager** menu item.

On the [Start](#) operation, RealTimeToDB opens all available connections, seeks [database configuration](#) tables, and starts updating configured tables.

## Configuration File Format

The configuration file can contain the **appSettings** and **connectionStrings** sections.

Configuration file example:

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <appSettings>
    <add key="AppCulture" value="en-US"/>
    <add key="AutoStart" value="true"/>
    <add key="ConnectionTimeout" value="5"/>
    <add key="CommandTimeout" value="5"/>
    <add key="InstanceName" value=""/>
    <add key="MinimizeToTray" value="true"/>
    <add key="RefreshTimerInterval" value="50"/>
    <add key="RefreshTaskInterval" value="0"/>
    <add key="ServersAsAdmin" value="TOS VFX"/>
    <add key="TwsUserName" value=""/>
    <!--<add key="TosDecimalSeparator" value=","/>-->
    <!--<add key="TosGroupSeparator" value=" " />-->
    <add key="TosMaxUpdateRows" value="100"/>
    <add key="TosMinUpdateTime" value="10000"/>
    <add key="TosMaxUpdateTime" value="20000"/>
    <add key="tos.rtdMaxUpdateRows" value="100"/>
    <add key="tos.rtdMinUpdateTime" value="10000"/>
    <add key="tos.rtdMaxUpdateTime" value="20000"/>
    <add key="tos.rtdIsDynamicCalls" value="True"/>
    <!--<add key="NoDataLimit" value="20"/>-->
    <!--<add key="DataProcessor" value="DataProcessorCS.dll"/>-->
  </appSettings>
  <connectionStrings>
    <add name="rtd-mssql"
      connectionString="Data Source=.\SQLEXPRESS;Initial Catalog=RTD;Integrated Security=True"
      providerName="System.Data.SqlClient" />
  </connectionStrings>
</configuration>
```

Configuration file settings:

### AppCulture

This string value defines the application culture used for user interface translation.

### AutoStart

This boolean value defines the immediate start of data updating after the program start.

Start the application with administrator privileges for updating data from DDE servers that require such privileges (TOS, VFX).

### ConnectionTimeout

This integer value defines the server connection timeout in seconds.

### CommandTimeout

This integer value defines the timeout of command execution in seconds.

### InstanceName

This string value defines the instance name used to select [table configurations](#) using the RTD\_INSTANCE\_NAME field.

### MinimizeToTray

This boolean value allows minimizing the application window in the system tray.

### RefreshTimerInterval

This integer value defines the interval of data refreshing in milliseconds.

### RefreshTimerInterval

This integer value defines the interval of checking changes in task tables specified in the LOAD\_CODE field of the RealTimeTables table.

### **ServersAsAdmin**

This string value defines RTD and DDE servers that require administrator privileges. RealTimeToDB requests elevating for these servers.

### **TwsUserName**

This string value defines a username for InteractiveBrokers Trader Workstation (TWS). This name is used in real-time formulas like =S<TwsUserName> by default if the =S server is specified only.

### **<DDE Server>DecimalSeparator**

This char value defines a decimal separator in DDE return values. You have to specify it if RealTimeToDB can't detect it automatically.

### **<DDE Server>GroupSeparator**

This char value defines a group separator in DDE return values. You have to specify it if RealTimeToDB can't detect it automatically.

### **<Server>MaxUpdateRows**

This integer value defines a maximum number of active tickers connected to the server. This option prevents server overhead. RealTimeToDB changes the tickers cyclically.

### **<Server>MinUpdateTime**

This integer value defines a minimum number of milliseconds that a ticker must be connected to the server before it is replaced with a new one when the total number of tickers is more than MaxUpdateRows.

### **<Server>MaxUpdateTime**

This integer value defines a maximum number of milliseconds that a ticker can be connected to the server before it is replaced with a new one when the total number of tickers is more than MaxUpdateRows.

### **<RTD Server>IsDynamicCalls**

This boolean value defines a calling model for the RTD server: IRtdServer typed calls or dynamic calls. thinkorswim thinkDesktop requires the dynamic model if Microsoft Excel is not installed.

### **NoDataLimit**

This integer value defines the maximum number of refresh cycles without data refresh that starts reconnecting to a server. Use this option if the server must return real-time data every time but may have issues.

### **DataProcessor**

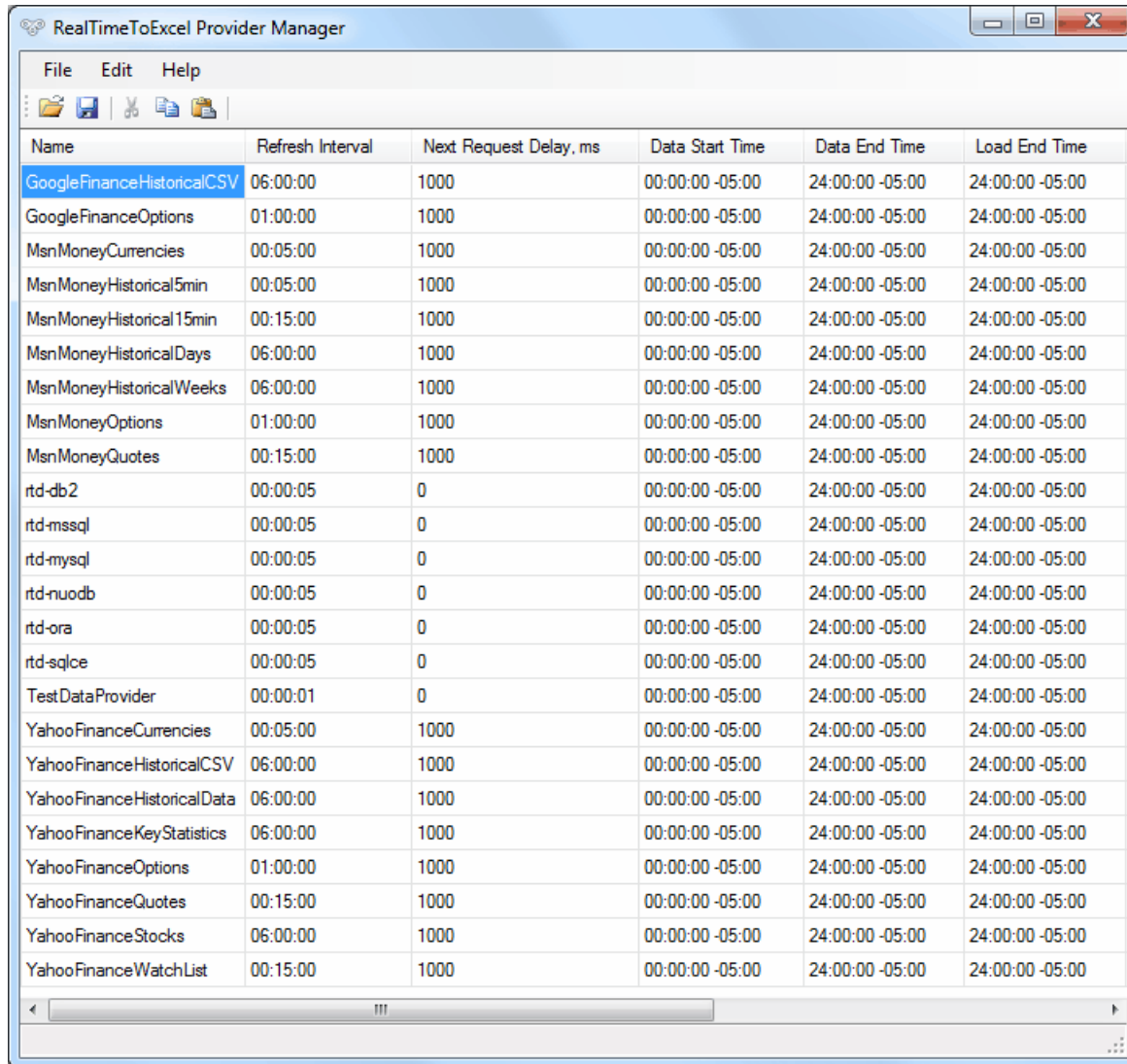
This string value defines a RealTimeToDB add-in used to preprocess data. See [RealTimeToDB Add-Ins](#).

## Data Provider Manager

You may edit RealTimeToExcel data provider settings in a visual mode.

See RealTimeToExcel documentation for details.

Here is a screenshot of the default providers:



The screenshot shows the 'RealTimeToExcel Provider Manager' window. It has a menu bar with 'File', 'Edit', and 'Help'. Below the menu is a toolbar with icons for file operations. The main area is a table listing various data providers. The table has six columns: 'Name', 'Refresh Interval', 'Next Request Delay, ms', 'Data Start Time', 'Data End Time', and 'Load End Time'. The providers listed include GoogleFinanceHistoricalCSV, GoogleFinanceOptions, MsnMoneyCurrencies, MsnMoneyHistorical5min, MsnMoneyHistorical15min, MsnMoneyHistoricalDays, MsnMoneyHistoricalWeeks, MsnMoneyOptions, MsnMoneyQuotes, rtd-db2, rtd-mssql, rtd-mysql, rtd-nuodb, rtd-ora, rtd-sqlce, TestDataProvider, YahooFinanceCurrencies, YahooFinanceHistoricalCSV, YahooFinanceHistoricalData, YahooFinanceKeyStatistics, YahooFinanceOptions, YahooFinanceQuotes, YahooFinanceStocks, and YahooFinanceWatchList. The 'GoogleFinanceHistoricalCSV' provider is selected, highlighted in blue.

Name	Refresh Interval	Next Request Delay, ms	Data Start Time	Data End Time	Load End Time
GoogleFinanceHistoricalCSV	06:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
GoogleFinanceOptions	01:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
MsnMoneyCurrencies	00:05:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
MsnMoneyHistorical5min	00:05:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
MsnMoneyHistorical15min	00:15:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
MsnMoneyHistoricalDays	06:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
MsnMoneyHistoricalWeeks	06:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
MsnMoneyOptions	01:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
MsnMoneyQuotes	00:15:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
rtd-db2	00:00:05	0	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
rtd-mssql	00:00:05	0	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
rtd-mysql	00:00:05	0	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
rtd-nuodb	00:00:05	0	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
rtd-ora	00:00:05	0	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
rtd-sqlce	00:00:05	0	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
TestDataProvider	00:00:01	0	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
YahooFinanceCurrencies	00:05:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
YahooFinanceHistoricalCSV	06:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
YahooFinanceHistoricalData	06:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
YahooFinanceKeyStatistics	06:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
YahooFinanceOptions	01:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
YahooFinanceQuotes	00:15:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
YahooFinanceStocks	06:00:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00
YahooFinanceWatchList	00:15:00	1000	00:00:00 -05:00	24:00:00 -05:00	24:00:00 -05:00

## Database Configuration

RealTimeToDB updates database table fields with real-time values from real-time servers.

The **field configuration table** is used to configure what fields must be updated and how.

The Microsoft Excel formula format is used to configure. It's easy.

You may copy formulas from Microsoft Excel workbooks.

Also, you may change behavior for certain tables using the **table configuration table**.

RealTimeToDB loads the configurations on the [Start](#) operation.

You may check loading progress and possible errors in the message panel of the main form.

### Field Configuration Table

RealTimeToDB reads the field configuration from the table that contains the following fields:

1. TABLE\_SCHEMA
2. TABLE\_NAME
3. COLUMN\_NAME
4. RTD\_FORMULA
5. IS\_DISABLED

The table can contain an additional primary key first column.

Configuration data formats:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	IS_DISABLED
<Table schema>	<Table name>	<Column name>	<RTD or DDE formula>	1/0/NULL

The **TABLE\_SCHEMA** and **TABLE\_NAME** fields specify the database table.

The **COLUMN\_NAME** field specifies the column of database tables.

The **RTD\_FORMULA** column specifies RTD or DDE formula used to get real-time data.

The **IS\_DISABLED** field allows disabling field updating. Use this if you do not want to delete the row.

Formula format is very similar to Microsoft Excel format.

However, the formulas must contain parameter columns in square brackets instead of real tickers.

Below the example of the configuration table:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA
rtd	QuotesES	Code	
rtd	QuotesES	Symbol	=RTD("esrtd",,[Code],"Symbol")
rtd	QuotesES	Time	=RTD("esrtd",,[Code],"Time")
rtd	QuotesES	Last	=RTD("esrtd",,[Code],"Last")
rtd	QuotesES	Change	=RTD("esrtd",,[Code],"Change")
rtd	QuotesES	PercentChange	=RTD("esrtd",,[Code],"% Change")
rtd	QuotesES	Open	=RTD("esrtd",,[Code],"Open")
rtd	QuotesES	High	=RTD("esrtd",,[Code],"High")
rtd	QuotesES	Low	=RTD("esrtd",,[Code],"Low")
rtd	QuotesES	Volume	=RTD("esrtd",,[Code],"Volume")
rtd	QuotesTOS	Symbol	
rtd	QuotesTOS	Time	=Time()
rtd	QuotesTOS	Last	=TOS LAST![Symbol]
rtd	QuotesTOS	Change	=TOS NET_CHANGE![Symbol]
rtd	QuotesTOS	PercentChange	=TOS PERCENT_CHANGE![Symbol]
rtd	QuotesTOS	Open	=TOS OPEN![Symbol]
rtd	QuotesTOS	High	=TOS HIGH![Symbol]
rtd	QuotesTOS	Low	=TOS LOW![Symbol]
rtd	QuotesTOS	Close	=TOS CLOSE![Symbol]
rtd	QuotesTOS	Volume	=TOS VOLUME![Symbol]

The columns of the rtd.QuotesES table are updated from the eSignal **FutureSource** real-time RTD server ("esrtd").

The columns of the rtd.QuotesTOS table are updated from the Thinkorswim **thinkDesktop** real-time DDE server ("TOS").

rtd.QuotesES contains the Code column that is used as a parameter.

The Code column belongs to a task table (see below) and does not exist in rtd.QuotesES.

However, such parameter fields must be specified in the field configuration table to load parameter columns into the table column set.

rtd.QuotesTOS contains the Symbol column that is used as a parameter.

rtd.QuotesTOS contains the Time column calculated by RealTimeToDB as TOS have no time fields.

See the complete [list of built-in functions](#).

## Table Configuration Table

RealTimeToDB reads the table configuration from the table that contains the following fields:

1. TABLE\_SCHEMA
2. TABLE\_NAME
3. LOAD\_CODE
4. IS\_HISTORY
5. IS\_DISABLED
6. TIME\_ZONE
7. RTD\_INSTANCE\_NAME

The table can contain an additional primary key first column.

Configuration data formats:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY	IS_DISABLED	TIME_ZONE	RTD_INSTANCE_NAME
<Table schema>	<Table name>	<SQL command>	1/0/NULL	1/0/NULL	<Time Zone>	<Instance Name>

The **TABLE\_SCHEMA** and **TABLE\_NAME** fields specify the database table.

The **LOAD\_CODE** field allows changing the default code to load initial data from databases into RealTimeToDB.

The default code is

```
SELECT <COLUMNS> FROM <TABLE_SCHEMA>.<TABLE_NAME>
```

where <COLUMNS> are primary key columns, and real-time and formula parameter columns from the field configuration table.

You may change the default code to load the task data from other tables.

For example:

```
SELECT DISTINCT Symbols FROM dbo.WatchList UNION SELECT DISTINCT Symbols FROM dbo.Portfolio
```

The **IS\_HISTORY** field allows switching on the history mode.

In this mode, RealTimeToDB uses insert commands to update data first, and then uses the update command if the inserting has failed.

The **IS\_DISABLED** field allows turning off the table update.

The **TIME\_ZONE** field defines the time zone of the table. This time zone is used to adjust the current PC time in built-in functions like =Time().

Specify 'Eastern Standard Time' for US exchanges.

See available time zones at [http://technet.microsoft.com/en-us/library/cc749073\(v=ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc749073(v=ws.10).aspx).

The **RTD\_INSTANCE\_NAME** field specifies RealTimeToDB instances that must update this table. Other instances ignore such tables.

The default instance names are **x86** for the 32-bit and **x64** for 64-bit RealTimeToDB executables.

User defined names are supported in the RealTimeToDB Enterprise edition and can be configured in the [application configuration files](#).

## Creating Configuration Tables

The RealTimeToDB setup package contains the [RTD Database](#) source codes for supported databases platforms.

It is the fastest way to create database tables and ready-to-used configuration tables for several real-time data providers.

You may also use the SQL code below to create configuration tables in your databases.

- [Configuration Tables for Microsoft SQL Server](#)
- [Configuration Tables for Microsoft SQL Server Compact](#)
- [Configuration Tables for MySQL and MariaDB](#)

- [Configuration Tables for Oracle Database](#)
- [Configuration Tables for IBM DB2](#)
- [Configuration Tables for NuoDB](#)
- [Configuration Tables for PostgreSQL](#)



## Configuration Tables for Microsoft SQL Server

You may use the following SQL codes to create configuration tables in Microsoft SQL Server databases:

```
CREATE TABLE [rtd].[RealTimeFormulas](
    [ID] [int] IDENTITY(1,1) NOT NULL,
    [TABLE_SCHEMA] [nvarchar](128) NOT NULL,
    [TABLE_NAME] [nvarchar](128) NOT NULL,
    [COLUMN_NAME] [nvarchar](128) NOT NULL,
    [RTD_FORMULA] [nvarchar](255) NULL,
    [IS_DISABLED] [tinyint] NULL,
    CONSTRAINT [PK_RealTimeFormulas_rtd] PRIMARY KEY ([ID] ASC),
    CONSTRAINT [IX_RealTimeFormulas_Schema_Name_ColumnName_rtd] UNIQUE
(
    [TABLE_SCHEMA] ASC,
    [TABLE_NAME] ASC,
    [COLUMN_NAME] ASC
)
);
GO
```

```
CREATE TABLE [rtd].[RealTimeTables](
    [ID] [int] IDENTITY(1,1) NOT NULL,
    [TABLE_SCHEMA] [nvarchar](128) NOT NULL,
    [TABLE_NAME] [nvarchar](128) NOT NULL,
    [LOAD_CODE] [nvarchar](2000) NULL,
    [IS_HISTORY] [tinyint] NULL,
    [IS_DISABLED] [tinyint] NULL,
    [TIME_ZONE] [nvarchar](50) NULL,
    [RTD_INSTANCE_NAME] [nvarchar](50) NULL,
    CONSTRAINT [PK_RealTimeTables_rtd] PRIMARY KEY ([ID] ASC),
    CONSTRAINT [IX_RealTimeTables_Schema_Name_rtd] UNIQUE
(
    [TABLE_SCHEMA] ASC,
    [TABLE_NAME] ASC
)
);
GO
```

## Configuration Tables for Microsoft SQL Server Compact

You may use the following SQL codes to create configuration tables in Microsoft SQL Server Compact databases:

```
CREATE TABLE [RealTimeFormulas](
    [ID] [int] IDENTITY(1,1) NOT NULL,
    [TABLE_SCHEMA] [nvarchar](128) NULL,
    [TABLE_NAME] [nvarchar](128) NOT NULL,
    [COLUMN_NAME] [nvarchar](128) NOT NULL,
    [RTD_FORMULA] [nvarchar](255) NULL,
    [IS_DISABLED] [tinyint] NULL,
    CONSTRAINT [PK_RealTimeFormulas] PRIMARY KEY ([ID]),
    CONSTRAINT [IX_RealTimeFormulas_Name_ColumnName] UNIQUE
(
    [TABLE_NAME],
    [COLUMN_NAME]
)
);
GO
```

```
CREATE TABLE [RealTimeTables](
    [ID] [int] IDENTITY(1,1) NOT NULL,
    [TABLE_SCHEMA] [nvarchar](128) NULL,
    [TABLE_NAME] [nvarchar](128) NOT NULL,
    [LOAD_CODE] [nvarchar](2000) NULL,
    [IS_HISTORY] [tinyint] NULL,
    [IS_DISABLED] [tinyint] NULL,
    [TIME_ZONE] [nvarchar](50) NULL,
    [RTD_INSTANCE_NAME] [nvarchar](50) NULL,
    CONSTRAINT [PK_RealTimeTables] PRIMARY KEY ([ID]),
    CONSTRAINT [IX_RealTimeTables_Schema_Name] UNIQUE
(
    [TABLE_NAME]
)
);
GO
```

## Configuration Tables for MySQL and MariaDB

You may use the following SQL codes to create configuration tables in MySQL and MariaDB databases:

```
CREATE TABLE IF NOT EXISTS `rtd`.`real_time_formulas` (
  `ID` INTEGER NOT NULL AUTO_INCREMENT,
  `TABLE_SCHEMA` VARCHAR(128) NOT NULL,
  `TABLE_NAME` VARCHAR(128) NOT NULL,
  `COLUMN_NAME` VARCHAR(128) NOT NULL,
  `RTD_FORMULA` VARCHAR(255) NULL,
  `IS_DISABLED` TINYINT NULL,
  PRIMARY KEY (`ID`)
);

ALTER TABLE `rtd`.`real_time_formulas`
ADD UNIQUE INDEX `ix_real_time_formulas_schema_name_column_name`
USING BTREE (
  `TABLE_SCHEMA`,
  `TABLE_NAME`,
  `COLUMN_NAME`
);

CREATE TABLE IF NOT EXISTS `rtd`.`real_time_tables` (
  `ID` INTEGER NOT NULL AUTO_INCREMENT,
  `TABLE_SCHEMA` VARCHAR(128) NOT NULL,
  `TABLE_NAME` VARCHAR(128) NOT NULL,
  `LOAD_CODE` VARCHAR(2000) NULL,
  `IS_HISTORY` TINYINT NULL,
  `IS_DISABLED` TINYINT NULL,
  `TIME_ZONE` VARCHAR(50) NULL,
  `RTD_INSTANCE_NAME` VARCHAR(50) NULL,
  PRIMARY KEY (`ID`)
);

ALTER TABLE `rtd`.`real_time_tables`
ADD UNIQUE INDEX `ix_realtimetables_schema_name`
USING BTREE (
  `TABLE_SCHEMA`,
  `TABLE_NAME`
);
```

## Configuration Tables for Oracle Database

You may use the following SQL codes to create configuration tables in Oracle Database databases:

```
CREATE TABLE "RTD"."REAL_TIME_FORMULAS" (
  "ID" NUMBER NOT NULL,
  "TABLE_SCHEMA" VARCHAR2(128) NOT NULL,
  "TABLE_NAME" VARCHAR2(128) NOT NULL,
  "COLUMN_NAME" VARCHAR2(128) NOT NULL,
  "RTD_FORMULA" VARCHAR2(255) NULL,
  "IS_DISABLED" NUMBER(1) NULL,
  CONSTRAINT "PK_REAL_TIME_FORMULAS"
  PRIMARY KEY ("ID"),
  CONSTRAINT "IX_REAL_TIME_FORMULAS_COLUMN"
  UNIQUE ("TABLE_SCHEMA", "TABLE_NAME", "COLUMN_NAME")
);

CREATE SEQUENCE "RTD"."SQ_REAL_TIME_FORMULAS_ID"
INCREMENT BY 1
START WITH 1
MAXVALUE 1E28
MINVALUE 1
NOCYCLE
CACHE 20
NOORDER;

CREATE TRIGGER "RTD"."TRG_REAL_TIME_FORMULAS_ID"
BEFORE INSERT OR UPDATE
ON "RTD"."REAL_TIME_FORMULAS"
REFERENCING NEW AS NEW OLD AS OLD FOR EACH ROW
BEGIN
  IF :new.ID IS NULL THEN
    SELECT SQ_REAL_TIME_FORMULAS_ID.NEXTVAL INTO :new.ID FROM dual;
  END IF;
END;
/
```

```

CREATE TABLE "RTD"."REAL_TIME_TABLES" (
    "ID" NUMBER NOT NULL,
    "TABLE_SCHEMA" VARCHAR2(128) NOT NULL,
    "TABLE_NAME" VARCHAR2(128) NOT NULL,
    "LOAD_CODE" VARCHAR2(2000) NULL,
    "IS_HISTORY" NUMBER(1) NULL,
    "IS_DISABLED" NUMBER(1) NULL,
    "TIME_ZONE" VARCHAR2(50) NULL,
    "RTD_INSTANCE_NAME" VARCHAR2(50) NULL,
    CONSTRAINT "PK_REAL_TIME_TABLES"
        PRIMARY KEY ("ID"),
    CONSTRAINT "IX_REAL_TIME_TABLES_TABLE"
        UNIQUE ("TABLE_SCHEMA", "TABLE_NAME")
);

CREATE SEQUENCE "RTD"."SQ_REAL_TIME_TABLES_ID"
    INCREMENT BY 1
    START WITH 1
    MAXVALUE 1E28
    MINVALUE 1
    NOCYCLE
    CACHE 20
    NOORDER;

CREATE TRIGGER "RTD"."TRG_REAL_TIME_TABLES_ID"
    BEFORE INSERT OR UPDATE
    ON "RTD"."REAL_TIME_TABLES"
    REFERENCING NEW AS NEW OLD AS OLD FOR EACH ROW
    BEGIN
        IF :new.ID IS NULL THEN
            SELECT SQ_REAL_TIME_TABLES_ID.NEXTVAL INTO :new.ID FROM dual;
        END IF;
    END;
/

```

## Configuration Tables for IBM DB2

You may use the following SQL codes to create configuration tables in IBM DB2 databases:

```

CREATE TABLE "RTD"."REAL_TIME_FORMULAS" (
    "ID" INTEGER NOT NULL GENERATED BY DEFAULT AS IDENTITY,
    "TABLE_SCHEMA" VARCHAR(128) NOT NULL,
    "TABLE_NAME" VARCHAR(128) NOT NULL,
    "COLUMN_NAME" VARCHAR(128) NOT NULL,
    "RTD_FORMULA" VARCHAR(255) NULL,
    "IS_DISABLED" SMALLINT NULL,
    CONSTRAINT "PK_REAL_TIME_FORMULAS"
        PRIMARY KEY ("ID"),
    CONSTRAINT "IX_REAL_TIME_FORMULAS_COLUMN"
        UNIQUE ("TABLE_SCHEMA", "TABLE_NAME", "COLUMN_NAME")
);

```

```

CREATE TABLE "RTD"."REAL_TIME_TABLES" (
    "ID" INTEGER NOT NULL GENERATED BY DEFAULT AS IDENTITY,
    "TABLE_SCHEMA" VARCHAR(128) NOT NULL,
    "TABLE_NAME" VARCHAR(128) NOT NULL,
    "LOAD_CODE" VARCHAR(2000) NULL,
    "IS_HISTORY" SMALLINT NULL,
    "IS_DISABLED" SMALLINT NULL,
    "TIME_ZONE" VARCHAR(50) NULL,
    "RTD_INSTANCE_NAME" VARCHAR(50) NULL,
    CONSTRAINT "PK_REAL_TIME_TABLES"
        PRIMARY KEY ("ID"),
    CONSTRAINT "IX_REAL_TIME_TABLES_TABLE"
        UNIQUE ("TABLE_SCHEMA", "TABLE_NAME")
);

```

## Configuration Tables for NuoDB

You may use the following SQL codes to create configuration tables in NuoDB databases:

```

CREATE TABLE "RTD"."REAL_TIME_FORMULAS" (
    "ID" INTEGER NOT NULL GENERATED BY DEFAULT AS IDENTITY,
    "TABLE_SCHEMA" VARCHAR(128) NOT NULL,
    "TABLE_NAME" VARCHAR(128) NOT NULL,
    "COLUMN_NAME" VARCHAR(128) NOT NULL,
    "RTD_FORMULA" VARCHAR(255) NULL,

```

```

        "IS_DISABLED" SMALLINT NULL,
        PRIMARY KEY ("ID")
    );

CREATE UNIQUE INDEX "IX_REAL_TIME_FORMULAS_COLUMN"
    ON "RTD"."REAL_TIME_FORMULAS" ("TABLE_SCHEMA", "TABLE_NAME", "COLUMN_NAME");

CREATE TABLE "RTD"."REAL_TIME_TABLES" (
    "ID" INTEGER NOT NULL GENERATED BY DEFAULT AS IDENTITY,
    "TABLE_SCHEMA" VARCHAR(128) NOT NULL,
    "TABLE_NAME" VARCHAR(128) NOT NULL,
    "LOAD_CODE" STRING NULL,
    "IS_HISTORY" SMALLINT NULL,
    "IS_DISABLED" SMALLINT NULL,
    "TIME_ZONE" VARCHAR(50) NULL,
    "RTD_INSTANCE_NAME" VARCHAR(50) NULL,
    PRIMARY KEY ("ID")
);

CREATE UNIQUE INDEX "IX_REAL_TIME_TABLES_TABLE"
    ON "RTD"."REAL_TIME_TABLES" ("TABLE_SCHEMA", "TABLE_NAME");

```

## Configuration Tables for PostgreSQL

You may use the following SQL codes to create configuration tables in PostgreSQL databases:

```

CREATE TABLE IF NOT EXISTS rtd.real_time_formulas (
    id serial NOT NULL,
    table_schema varchar(128) NOT NULL,
    table_name varchar(128) NOT NULL,
    column_name varchar(128) NOT NULL,
    rtd_formula varchar(255) NULL,
    is_disabled smallint NULL,
    PRIMARY KEY (id)
);

CREATE UNIQUE INDEX ix_real_time_formulas_schema_name_column_name ON rtd.real_time_formulas
    USING BTREE (
        table_schema,
        table_name,
        column_name
    );

CREATE TABLE IF NOT EXISTS rtd.real_time_tables (
    id serial NOT NULL,
    table_schema varchar(128) NOT NULL,
    table_name varchar(128) NOT NULL,
    load_code varchar(2000) NULL,
    is_history smallint NULL,
    is_disabled smallint NULL,
    time_zone varchar(50) NULL,
    rtd_instance_name varchar(50) NULL,
    PRIMARY KEY (id)
);

CREATE UNIQUE INDEX ix_realtimetables_schema_name ON rtd.real_time_tables
    USING BTREE (
        table_schema,
        table_name
    );

```

## RealTimeToDB Functions

The [real-time field configuration](#) table contains Excel-like formulas for getting data from real-time RTD and DDE servers.

Real-time servers can have no fields about date or time of the data.

In this case, you may use built-in RealTimeToDB formulas to update the database fields.

For example:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA
rtd	QuoteDayHistoryTOS	Symbol	
rtd	QuoteDayHistoryTOS	Date	=Date()
rtd	QuoteDayHistoryTOS	Time	=Time()
rtd	QuoteDayHistoryTOS	Last	=TOS LAST! Symbol]
rtd	QuoteDayHistoryTOS	Change	=TOS NET_CHANGE! Symbol]
rtd	QuoteDayHistoryTOS	Bid	=TOS BID! Symbol]
rtd	QuoteDayHistoryTOS	Ask	=TOS ASK! Symbol]

Thinkorswim thinkDesktop have no date and time fields.

So, to get the quote day history we need to use internal formulas =Date() and =Time().

Note, that the last data update fields are updated using the PC time adjusted to the table time zone, specified in the [table configuration](#).

You may use the 'Eastern Standard Time' time zone for US stock exchanges.

## Function List

Function	Result
=TimeStamp()	Returns the current UTC datetime.
=UtcNow()	Returns the current UTC datetime.
=Now()	Returns the current datetime.
=TableNow()	Returns the current datetime adjusted to the table time zone.
=DateTime()	Returns the last data update datetime.
=DateTime0()	Returns the last data update datetime rounded to 1 second up.
=DateTime1()	Returns the last data update datetime rounded to 1 minute up.
=DateTime5()	Returns the last data update datetime rounded to 5 minutes up.
=DateTime10()	Returns the last data update datetime rounded to 10 minutes up.
=DateTime15()	Returns the last data update datetime rounded to 15 minutes up.
=DateTime20()	Returns the last data update datetime rounded to 20 minutes up.
=DateTime60()	Returns the last data update datetime rounded to 60 minutes up.
=Date()	Returns the last data update date.
=Time()	Returns the last data update time.
=Time0()	Returns the last data update time rounded to 1 second up.
=Time1()	Returns the last data update time rounded to 1 minute up.
=Time5()	Returns the last data update time rounded to 5 minutes up.
=Time10()	Returns the last data update time rounded to 10 minutes up.
=Time15()	Returns the last data update time rounded to 15 minutes up.
=Time20()	Returns the last data update time rounded to 20 minutes up.
=Time60()	Returns the last data update time rounded to 60 minutes up.

## RealTimeToDB Add-Ins

---

The data can be processed before sending to a database using an external data processor, a RealTimeToDB add-in.

This feature can be used for broadcasting data, for example.

The data processor must implement the IRDDDataProcessor interface defined in IDataProcessor.dll:

```
void IRDDDataProcessor.AppStart()  
void IRDDDataProcessor.AppStop()  
bool IRDDDataProcessor.ProcessRow(IRDDDataRow data)
```

The ProcessRow method is called before every saving data to a database.

The add-in can read the column data of the current row and change it using the Item property.

The data processor add-in must be attached using the configuration setting. For example:

```
<?xml version="1.0" encoding="utf-8" ?>  
<configuration>  
  <appSettings>  
    <add key="DataProcessor" value="RTDataBroadcastProcessor.dll"/>  
  </appSettings>  
</configuration>
```

You may find data processing add-in examples in C# and VB in the DataProcessor.zip file in the setup package.

## Product Registration

---

RealTimeToDB has several editions. See [Edition comparison](#).

The registration process is required to register the desired edition.

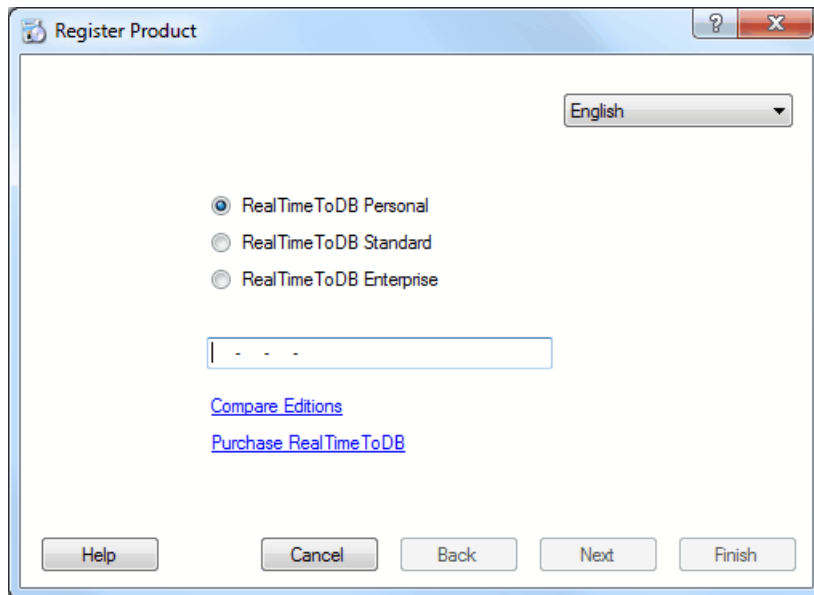
To start the registration process, click **Help, Register Product**.

A product code is required to register the Personal, Standard, or Enterprise edition.

The product code is sent by email after purchasing.

### Selecting Edition

Select an edition and fill in the product code for the Personal, Standard, or Enterprise edition.



The image shows a Windows-style dialog box titled "Register Product". In the top right corner, there are icons for help (a question mark) and close (an 'X'). Below the title bar, on the right, is a language dropdown menu currently set to "English". In the center of the dialog, there are three radio button options: "RealTimeToDB Personal" (which is selected), "RealTimeToDB Standard", and "RealTimeToDB Enterprise". Below these options is a text input field containing three dashes "- - -". Underneath the input field are two blue hyperlinks: "Compare Editions" and "Purchase RealTimeToDB". At the bottom of the dialog, there is a row of five buttons: "Help", "Cancel", "Back", "Next", and "Finish".

## Licensee Data

Please complete the registration form carefully.

Register RealTimeToDB

A valid email address is required as it is used to send the activation code to you.

First name: \*

Last name: \*

Email address: \*

Company: \*

Country: \*

State: \*

☐ Register by email

☒ Register online

☒ I want to receive release news

☐ I agree to my personal data being stored and processed electronically

[Read online our privacy policy](#)

Cancel Back Next Finish

The **Next** button is enabled when all the required fields are filled.

Don't forget to check the required field about the personal data use.

## Online Registration

This step allows you to check your email address and to pause before the final step.

If the licensee data is valid, click **Next**.

You may return to the previous step using the **Back** button.

Register RealTimeToDB

The registration will be processed online.

Your activation code will be also emailed back to s.vaselenko@gartle.com. Please make sure that the email address is valid.

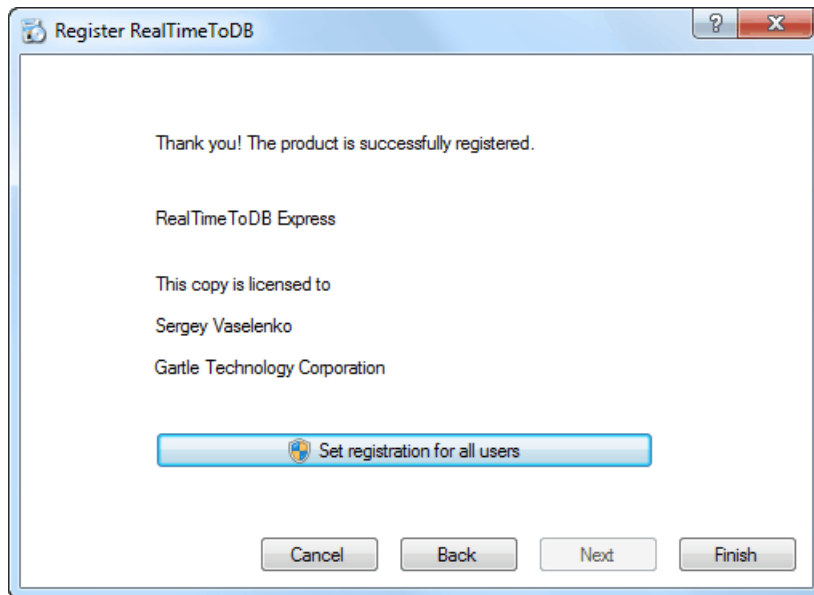
Cancel Back Next Finish

After clicking the **Next** button, the RealTimeToDB connects to the registration server.



If the connection is successful, the final step screen is shown.

If any error occurred during connection, you might try to register the product later or try to register the product by email.

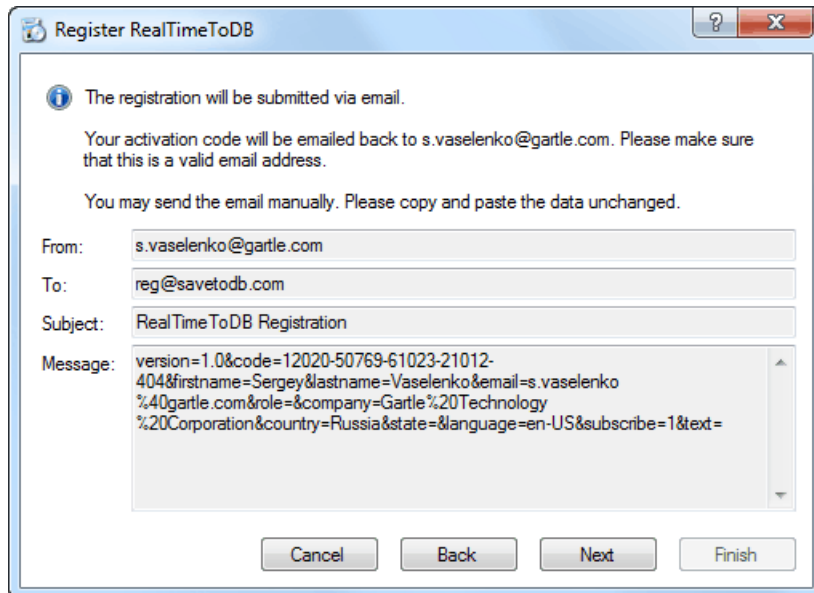


You may set the registration for all users of the computer. This action requires administrator privileges.

Click **Finish**.

## Registration by Email

If you choose the **Register by email** option on the **Licensee Data** step, the following screen is displayed:

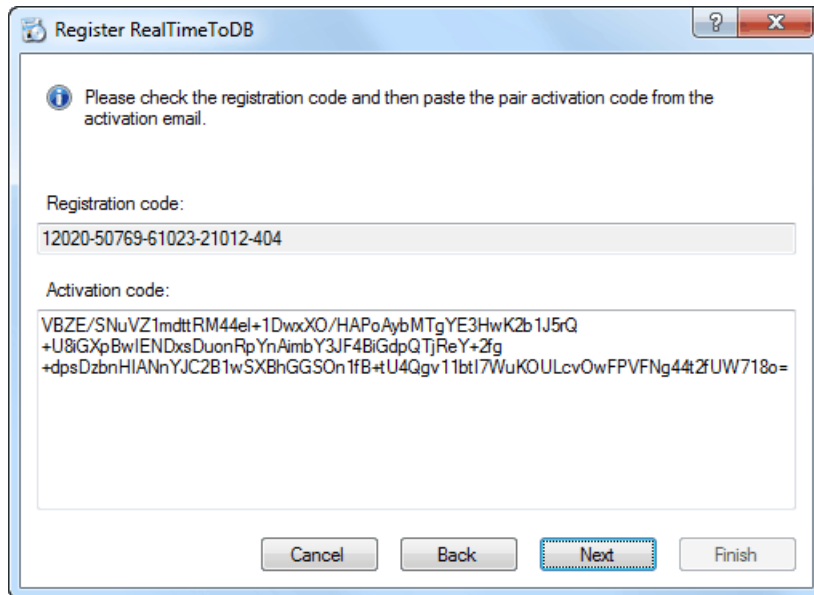


The **Next** button starts the default email program, creates a registration email, and activates the next step. Don't forget to send the email.

If starting of the email program has failed, you may create the registration email manually using the shown registration data. Please carefully copy the **To**, **Subject**, and the **Message** fields.

The registration server sends the reply in a couple of seconds; but you may close the dialog box and open it again, in the same step.

Please copy the activation code from the received registration email and paste it into the **Activation code** field.

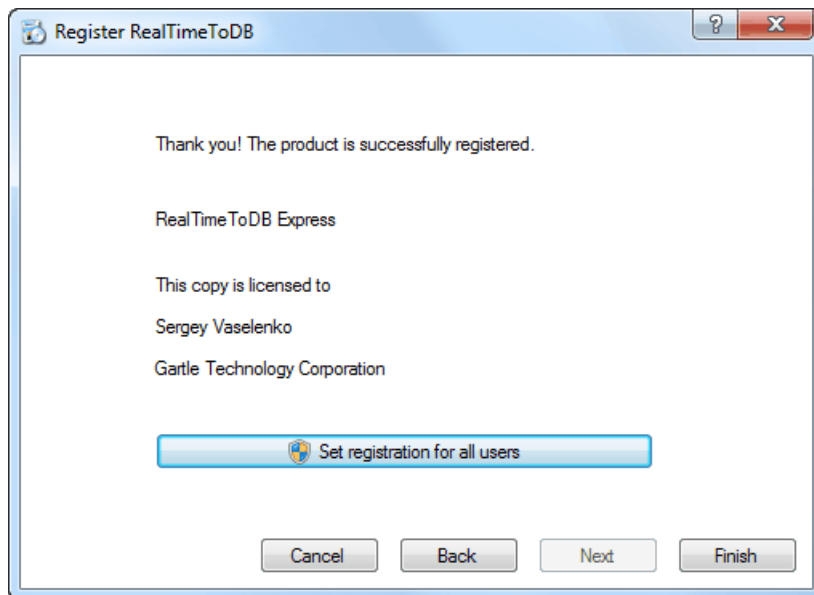


The dialog box titled "Register RealTimeToDB" contains an information icon and the text: "Please check the registration code and then paste the pair activation code from the activation email." Below this, there are two text input fields. The first field, labeled "Registration code:", contains the text "12020-50769-61023-21012-404". The second field, labeled "Activation code:", contains a long alphanumeric string: "VBZE/SNuVZ1mdttRM44el+1DwxXO/HAPoAybMTgYE3HwK2b1J5rQ+U8iGxpBwIENDxsDuonRpYnAimbY3JF4BiGdpQTjReY+2fg+dpsDzbnHIANnYJC2B1wSXBhGGSON1fB+tU4Qgv11btI7WuKOULcvOwFPVFNg44t2fUW718o=". At the bottom of the dialog, there are four buttons: "Cancel", "Back", "Next", and "Finish". The "Next" button is highlighted with a blue border, indicating it is the active button.

The **Next** button is enabled when the pasted activation code is valid.

Click **Next** to continue.

The RealTimeToDB checks the registration data and confirms the registration.



The dialog box titled "Register RealTimeToDB" displays a success message: "Thank you! The product is successfully registered." Below this, it shows the product name "RealTimeToDB Express" and the license information: "This copy is licensed to Sergey Vaselenko" and "Gartle Technology Corporation". A blue button with a shield icon and the text "Set registration for all users" is positioned below the license information. At the bottom of the dialog, there are four buttons: "Cancel", "Back", "Next", and "Finish". The "Next" button is highlighted with a blue border, indicating it is the active button.

You may set the registration for all users of the computer. This action requires administrator privileges.

Click **Finish**.

## RTD Database

---

### Overview

The RTD database is a ready-to-use solution for getting real-time data from preconfigured data providers using RealTimeToDB.

You may use the database as is, customize it, or use the source code to create required tables in your databases.

Preconfigured real-time data providers:

- [eSignal FutureSource \(ES\)](#)
- [Interactive Brokers Trader Workstation \(TWS\)](#)
- [Thinkorswim thinkDesktop \(TOS\)](#)
- [VertexFX Trader \(VFX\)](#)
- [Yahoo! Finance, Google Finance, and MSN Money through RealTimeToExcel](#)

Supported database servers:

- Microsoft SQL Server.
- Microsoft SQL Server Compact.
- SkySQL MariaDB.
- Oracle MySQL.
- Oracle Database.
- IBM DB2.
- NuoDB.

You may find the installation code and instructions in the **RTD Database** folder of the setup package.

The RTD database also contains preconfigured views for getting real-time data from database tables into Microsoft Excel using companion products RealTimeToExcel and the SaveToDB add-in for Microsoft Excel.

The SaveToDB add-in can also be used for editing configuration tables in Microsoft Excel. So you do not need any installed database client to manage and use the database.

### Preinstalled Local Database

The local RTD database for Microsoft SQL Server Compact is installed by default into the %LOCALAPPDATA%\Gartle\RealTimeToDB folder.

You may start loading real-time data into your database and using the real-time data in Microsoft Excel in a couple of minutes.

The source copy of the rtd.sdf database is also located in Resources subdirectory. You may use this copy to restore the database to the initial state.

### Installing and Uninstalling

The RTD Database folder of the setup package contains the subfolders with the source code and instructions for every supported database server.

Installation is an easy process: edit the connection properties and run the setup batch file.

The database must have two users:

- A user to update database tables using **RealTimeToDB**. The default name is **rtd**.
- A test user to get the data from the database into Microsoft Excel using **RealTimeToExcel**. The default name is **rtdxls**.

These names are used in preconfigured Excel workbooks and configuration files.

### Configuration Tables

SQL Server and SQL Server Compact	MySQL and MariaDB	Oracle Database, IBM DB2, and NuoDB
RealTimeTables	real_time_tables	REAL_TIME_TABLES
RealTimeFormulas	real_time_formulas	REAL_TIME_FORMULAS

The RealTimeTables table contains [table configurations](#) in line with RealTimeToDB [requirements](#).

Change the IS\_DISABLED field to manage updating data tables.

Change the LOAD\_CODE field to manage tickers to update.

The RealTimeFormulas table configures Excel-like formulas used to get data from RTD and DDE servers.

See formulas in data table descriptions.

You may use the following Excel workbooks included in the setup package to manage tables using Microsoft Excel with the SaveToDB add-in installed:

- rtd-mssql.xlsx
- rtd-sqlce.xlsx
- rtd-mysql.xlsx
- rtd-ora.xlsx
- rtd-db2.xlsx
- rtd-nuodb.xlsx

## Data Tables

SQL Server and SQL Server Compact	MySQL and MariaDB	Oracle Database, IBM DB2, and NuoDB
FundamentalsYahoo	fundamentals_day_history_yahoo	FUNDAMENTALS_DAY_HISTORY_YAHOO
FundamentalsDayHistoryYahoo	fundamentals_yahoo	FUNDAMENTALS_YAHOO
StocksYahoo	stocks_yahoo	STOCKS_YAHOO
QuotesYahoo	quotes_yahoo	QUOTES_YAHOO
QuoteDayHistoryYahoo	quote_day_history_yahoo	QUOTE_DAY_HISTORY_YAHOO
QuoteTimeHistoryYahoo	quote_time_history_yahoo	QUOTE_TIME_HISTORY_YAHOO
QuoteTickHistoryYahoo	quote_tick_history_yahoo	QUOTE_TICK_HISTORY_YAHOO
QuotesMsnMoney	quotes_msnmoney	QUOTES_MSNMONEY
QuoteDayHistoryMsnMoney	quote_day_history_msnmoney	QUOTE_DAY_HISTORY_MSNMONEY
QuoteTimeHistoryMsnMoney	quote_time_history_msnmoney	QUOTE_TIME_HISTORY_MSNMONEY
QuoteTickHistoryMsnMoney	quote_tick_history_msnmoney	QUOTE_TICK_HISTORY_MSNMONEY
OptionsYahoo	options_yahoo	OPTIONS_YAHOO
OptionDayHistoryYahoo	option_day_history_yahoo	OPTION_DAY_HISTORY_YAHOO
OptionTickHistoryYahoo	option_tick_history_yahoo	OPTION_TICK_HISTORY_YAHOO
OptionsGoogle	options_google	OPTIONS_GOOGLE
OptionDayHistoryGoogle	option_day_history_google	OPTION_DAY_HISTORY_GOOGLE
OptionTickHistoryGoogle	option_tick_history_google	OPTION_TICK_HISTORY_GOOGLE
OptionsMsnMoney	options_msnmoney	OPTIONS_MSNMONEY
OptionDayHistoryMsnMoney	option_day_history_msnmoney	OPTION_DAY_HISTORY_MSNMONEY
OptionTickHistoryMsnMoney	option_tick_history_msnmoney	OPTION_TICK_HISTORY_MSNMONEY
QuotesES	quotes_es	QUOTES_ES
QuoteDayHistoryES	quote_day_history_es	QUOTE_DAY_HISTORY_ES
QuoteTimeHistoryES	quote_time_history_es	QUOTE_TIME_HISTORY_ES
QuoteTickHistoryES	quote_tick_history_es	QUOTE_TICK_HISTORY_ES
QuotesTOS	quotes_tos	QUOTES_TOS
QuoteDayHistoryTOS	quote_day_history_tos	QUOTE_DAY_HISTORY_TOS
QuoteTickHistoryTOS	quote_tick_history_tos	QUOTE_TICK_HISTORY_TOS
OptionsTOS	options_tos	OPTIONS_TOS
OptionDayHistoryTOS	option_day_history_tos	OPTION_DAY_HISTORY_TOS
OptionTickHistoryTOS	option_tick_history_tos	OPTION_TICK_HISTORY_TOS
QuotesTWS	quotes_tws	QUOTES_TWS
QuoteDayHistoryTWS	quote_day_history_tws	QUOTE_DAY_HISTORY_TWS
QuoteTickHistoryTWS	quote_tick_history_tws	QUOTE_TICK_HISTORY_TWS
OptionsTWS	options_tws	OPTIONS_TWS
OptionDayHistoryTWS	option_day_history_tws	OPTION_DAY_HISTORY_TWS
OptionTickHistoryTWS	option_tick_history_tws	OPTION_TICK_HISTORY_TWS
QuotesVFX	quotes_vfx	QUOTES_VFX
QuoteDayHistoryVFX	quote_day_history_vfx	QUOTE_DAY_HISTORY_VFX
QuoteTimeHistoryVFX	quote_time_history_vfx	QUOTE_TIME_HISTORY_VFX
QuoteTickHistoryVFX	quote_tick_history_vfx	QUOTE_TICK_HISTORY_VFX
CurrenciesYahoo	currencies_yahoo	CURRENCIES_YAHOO
CurrenciesDayHistoryYahoo	currencies_day_history_yahoo	CURRENCIES_DAY_HISTORY_YAHOO
CurrenciesTimeHistoryYahoo	currencies_time_history_yahoo	CURRENCIES_TIME_HISTORY_YAHOO
CurrenciesTickHistoryYahoo	currencies_tick_history_yahoo	CURRENCIES_TICK_HISTORY_YAHOO
CurrenciesMsnMoney	currencies_msnmoney	CURRENCIES_MSNMONEY
CurrenciesDayHistoryMsnMoney	currencies_day_history_msnmoney	CURRENCIES_DAY_HISTORY_MSNMONEY
CurrenciesTimeHistoryMsnMoney	currencies_time_history_msnmoney	CURRENCIES_TIME_HISTORY_MSNMONEY
CurrenciesTickHistoryMsnMoney	currencies_tick_history_msnmoney	CURRENCIES_TICK_HISTORY_MSNMONEY

Data tables can be viewed from several perspectives.

Tables by data providers:

- [eSignal FutureSource \(ES\)](#)
- [Interactive Brokers Trader Workstation \(TWS\)](#)
- [Thinkorswim thinkDesktop \(TOS\)](#)
- [VertexFX Trader \(VFX\)](#)
- [Yahoo! Finance through RealTimeToExcel \(Yahoo\)](#)
- [Google Finance through RealTimeToExcel \(Google\)](#)
- [MSN Money through RealTimeToExcel \(MsnMoney\)](#)

Tables by stored data:

- Fundamentals (fundamental data from Yahoo! Finance).
- Stocks (static data from Yahoo! Finance).
- Quotes (stocks, futures, and currency pairs).
- Options.

Tables by time frame:

- Last values.
- Day history.
- Time history.
- Tick history.

Last value tables have one column primary keys, Symbol or Code.

Day history tables have two column primary keys, Symbol or Code and Date.

Time history tables have two column primary keys, Symbol or Code and DateTime.

You may change the time frame for such tables: 1 second (default), 1 minute, 5, 10, 15, 20, 30, and 60 minutes.

To change the time frame, modify used [functions](#) in the column formulas.

The time interval depends on a real-time data provider also.

Tick history tables contain all records from the real-time data provider. RealTimeToDB uses only INSERT statements for such tables.

The tick history tables must have an auto-increment primary key column.

You may click on any table above to go to the table description.

## Task Tables

SQL Server and SQL Server Compact	MySQL and MariaDB	Oracle Database, IBM DB2, and NuoDB
QuoteListStocks	quote_list_stocks	QUOTE_LIST_STOCKS
QuoteListYahoo	option_list_yahoo	OPTION_LIST_YAHOO
QuoteListMsnMoney	option_list_msnmoney	OPTION_LIST_MSNMONEY
QuoteListES	quote_list_es	QUOTE_LIST_ES
QuoteListTOS	quote_list_tos	QUOTE_LIST_TOS
QuoteListTWS	quote_list_tws	QUOTE_LIST_TWS
QuoteListVFX	quote_list_vfx	QUOTE_LIST_VFX
OptionListTOS	option_list_tos	OPTION_LIST_TOS
OptionListYahoo	option_list_yahoo	OPTION_LIST_YAHOO
OptionListGoogle	option_list_google	OPTION_LIST_GOOGLE
OptionListMsnMoney	option_list_msnmoney	OPTION_LIST_MSNMONEY
CurrenciesListYahoo	currencies_list_yahoo	CURRENCIES_LIST_YAHOO
CurrenciesListMsnMoney	currencies_list_msnmoney	CURRENCIES_LIST_MSNMONEY

Task tables contain tickers to update.

It is the simplest solution. You may delete all tickers and insert required ones. You may use Microsoft Excel workbooks like rtd-sqlce.xlsx or SQL statements to update task tables.

Another solution to specify tickers to update is to change the LOAD\_CODE in the RealTimeTables table.

You may use SELECT UNION to combine tickers from several tables that require real-time data.

Don't forget to [reload the configuration](#) in RealTimeToDB after changes.

## Views for Microsoft Excel for Refreshing Data in Real-Time

You may load database data into Microsoft Excel using native Excel features.

You may configure data auto-refresh to reload all table data.

However, you have a better way. You may use RealTimeToExcel, a companion product, to refresh the data using the Excel RTD functions with the lowest overhead.

The views shown below contain ready Excel formulas to get data from database tables in real-time.

SQL Server and SQL Server Compact	MySQL and MariaDB	Oracle Database, IBM DB2, and NuoDB
FundamentalsDayHistoryYahoo	fundamentals_day_history_yahoo	FUNDAMENTALS_DAY_HISTORY_YAHOO
FundamentalsYahoo	fundamentals_yahoo	FUNDAMENTALS_YAHOO
OptionDayHistoryTOS	option_day_history_tos	OPTION_DAY_HISTORY_TOS
OptionDayHistoryTWS	option_day_history_tws	OPTION_DAY_HISTORY_TWS
OptionDayHistoryYahoo	option_day_history_yahoo	OPTION_DAY_HISTORY_YAHOO
OptionDayHistoryGoogle	option_day_history_google	OPTION_DAY_HISTORY_GOOGLE
OptionDayHistoryMsnMoney	option_day_history_msnmoney	OPTION_DAY_HISTORY_MSNMONEY
OptionsTOS	options_tos	OPTIONS_TOS
OptionsTWS	options_tws	OPTIONS_TWS
OptionsYahoo	options_yahoo	OPTIONS_YAHOO
OptionsGoogle	options_google	OPTIONS_GOOGLE
OptionsMsnMoney	options_msnmoney	OPTIONS_MSNMONEY
QuoteDayHistoryES	quote_day_history_es	QUOTE_DAY_HISTORY_ES
QuoteDayHistoryTOS	quote_day_history_tos	QUOTE_DAY_HISTORY_TOS
QuoteDayHistoryTWS	quote_day_history_tws	QUOTE_DAY_HISTORY_TWS
QuoteDayHistoryVFX	quote_day_history_vfx	QUOTE_DAY_HISTORY_VFX
QuoteDayHistoryYahoo	quote_day_history_yahoo	QUOTE_DAY_HISTORY_YAHOO
QuoteDayHistoryMsnMoney	quote_day_history_msnmoney	QUOTE_DAY_HISTORY_MSNMONEY
QuotesES	quotes_es	QUOTES_ES
QuotesTOS	quotes_tos	QUOTES_TOS
QuotesTWS	quotes_tws	QUOTES_TWS
QuotesVFX	quotes_vfx	QUOTES_VFX
QuotesYahoo	quotes_yahoo	QUOTES_YAHOO
QuotesMsnMoney	quotes_msnmoney	QUOTES_MSNMONEY
StocksYahoo	stocks_yahoo	STOCKS_YAHOO
CurrenciesDayHistoryYahoo	currencies_day_history_yahoo	QUOTE_DAY_HISTORY_YAHOO
CurrenciesDayHistoryMsnMoney	currencies_day_history_msnmoney	QUOTE_DAY_HISTORY_MSNMONEY
CurrenciesYahoo	currencies_yahoo	QUOTES_YAHOO
CurrenciesMsnMoney	currencies_msnmoney	QUOTES_MSNMONEY

Also, the SaveToDB add-in converts such text database formulas into real Excel ones. So, you easily connect to any table and get the real-time data immediately.

You may use preconfigured Excel workbooks from the setup package to get the data from views:

- rtdxls-mssql.xlsx
- rtdxls-sqlce.xlsx
- rtdxls-mysql.xlsx
- rtdxls-ora.xlsx
- rtdxls-db2.xlsx
- rtdxls-nuodb.xlsx

See [Real-Time Views for Microsoft Excel](#) for details.

# Real-Time Data Providers

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## Overview

The RTD database contains tables and preconfigured formulas for the following real-time data providers:

- [eSignal FutureSource \(ES\)](#)
- [Interactive Brokers Trader Workstation \(TWS\)](#)
- [Thinkorswim thinkDesktop \(TOS\)](#)
- [VertexFX Trader \(VFX\)](#)
- [Yahoo! Finance, Google Finance, and MSN Money through RealTimeToExcel](#)

If you have any of providers installed, you may activate data updating in the **RealTimeTables** table by clearing the **IS\_DISABLED** flag.

RealTimeToExcel is integrated into RealTimeToDB and active by default.

## eSignal FutureSource (ES)

“FutureSource is designed to be fast and reliable real-time market data and decision support software supplied to the commodities, financial futures and foreign exchange trading communities.”

Website: <http://www.interactivedata.com/index.php/Contents/show/content/FutureSource>

## Interactive Brokers Trader Workstation (TWS)

“Our market maker-designed Trader Workstation (TWS) lets traders, investors and institutions trade stocks, options, futures, forex, bonds, and funds on over 100 markets worldwide from a single account.”

Website: <https://www.interactivebrokers.com/en/index.php?f=1537>

## Thinkorswim thinkDesktop (TOS)

“thinkDesktop is our premiere, feature-rich, downloadable software platform. This is the one you've probably heard about. The one that made everyone thinkorswim.”

Website: <https://www.thinkorswim.com/tos/displayPage.tos?webpage=clientApplication&displayFormat=hide>

## Hybrid Solutions VertexFX Trader (VFX)

“Our state-of-the-art Online Trading Platform, VertexFX Trader, is one of the most friendly, reliable and available online trading platforms in the world for all of STP and OTC business models.”

Website: <http://hybrid-solutions.com/>

## Yahoo! Finance, Google Finance, and MSN Money through RealTimeToExcel

“RealTimeToExcel is a powerful tool for getting real-time data from Yahoo! Finance, Google Finance, and MSN Money into Microsoft Excel.”

Website: [www.stock-data-solutions.com](http://www.stock-data-solutions.com)

# Configuration Tables

## Overview

The RTD Database contains preconfigured tables in different time frames for several real-time providers.

You may check or restore configurations using the tables below.

Click on the required table to go to the table description.

Only Microsoft SQL Server Compact database tables are activated by default.

Change the IS\_DISABLED field to activate the required tables.

You may modify the LOAD\_CODE field to load tickers and option codes from desired tables.

- [RealTimeTables Table for Microsoft SQL Server and SQL Server Compact](#)
- [real time tables Table for MySQL, MariaDB, and PostgreSQL](#)
- [REAL\\_TIME\\_TABLES Table for Oracle Database, IBM DB2, and NuoDB](#)

## RealTimeTables Table for Microsoft SQL Server and SQL Server Compact

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY	IS_DISABLED
rtd	FundamentalsYahoo	SELECT Code AS Symbol FROM rtd.QuoteListStocks		1
rtd	FundamentalsDayHistoryYahoo	SELECT Code AS Symbol FROM rtd.QuoteListStocks		
rtd	StocksYahoo	SELECT Code AS Symbol FROM rtd.QuoteListStocks		1
rtd	QuotesYahoo	SELECT Code AS Symbol FROM rtd.QuoteListYahoo		
rtd	QuoteDayHistoryYahoo	SELECT Code AS Symbol FROM rtd.QuoteListYahoo		1
rtd	QuoteTimeHistoryYahoo	SELECT Code AS Symbol FROM rtd.QuoteListYahoo		1
rtd	QuoteTickHistoryYahoo	SELECT Code AS Symbol FROM rtd.QuoteListYahoo	1	1
rtd	QuotesMsnMoney	SELECT Code AS Symbol FROM rtd.QuoteListMsnMoney		1
rtd	QuoteDayHistoryMsnMoney	SELECT Code AS Symbol FROM rtd.QuoteListMsnMoney		1
rtd	QuoteTimeHistoryMsnMoney	SELECT Code AS Symbol FROM rtd.QuoteListMsnMoney		1
rtd	QuoteTickHistoryMsnMoney	SELECT Code AS Symbol FROM rtd.QuoteListMsnMoney	1	1
rtd	OptionsYahoo	SELECT Code FROM rtd.OptionListYahoo		1
rtd	OptionDayHistoryYahoo	SELECT Code FROM rtd.OptionListYahoo		
rtd	OptionTickHistoryYahoo	SELECT Code FROM rtd.OptionListYahoo	1	1
rtd	OptionsGoogle	SELECT Code FROM rtd.OptionListGoogle		1
rtd	OptionDayHistoryGoogle	SELECT Code FROM rtd.OptionListGoogle		1
rtd	OptionTickHistoryGoogle	SELECT Code FROM rtd.OptionListGoogle	1	1
rtd	OptionsMsnMoney	SELECT Code FROM rtd.OptionListMsnMoney		1
rtd	OptionDayHistoryMsnMoney	SELECT Code FROM rtd.OptionListMsnMoney		1
rtd	OptionTickHistoryMsnMoney	SELECT Code FROM rtd.OptionListMsnMoney	1	1
rtd	QuotesES	SELECT Code FROM rtd.QuoteListES		1
rtd	QuoteDayHistoryES	SELECT Code FROM rtd.QuoteListES		1
rtd	QuoteTimeHistoryES	SELECT Code FROM rtd.QuoteListES		1
rtd	QuoteTickHistoryES	SELECT Code FROM rtd.QuoteListES	1	1
rtd	QuotesTOS	SELECT Code AS Symbol FROM rtd.QuoteListTOS		1
rtd	QuoteDayHistoryTOS	SELECT Code AS Symbol FROM rtd.QuoteListTOS		1
rtd	QuoteTickHistoryTOS	SELECT Code AS Symbol FROM rtd.QuoteListTOS	1	1
rtd	OptionsTOS	SELECT Code FROM rtd.OptionListTOS		1
rtd	OptionDayHistoryTOS	SELECT Code FROM rtd.OptionListTOS		1
rtd	OptionTickHistoryTOS	SELECT Code FROM rtd.OptionListTOS	1	1
rtd	QuotesTWS	SELECT TickId, Code AS Symbol FROM rtd.QuoteListTWS WHERE Code NOT LIKE '%_OPT_20%'		1
rtd	QuoteDayHistoryTWS	SELECT TickId, Code AS Symbol FROM rtd.QuoteListTWS WHERE Code NOT LIKE '%_OPT_20%'		1
rtd	QuoteTickHistoryTWS	SELECT TickId, Code AS Symbol FROM rtd.QuoteListTWS WHERE Code NOT LIKE '%_OPT_20%'	1	1
rtd	OptionsTWS	SELECT TickId, Code FROM rtd.QuoteListTWS WHERE Code LIKE '%_OPT_20%'		1
rtd	OptionDayHistoryTWS	SELECT TickId, Code FROM rtd.QuoteListTWS WHERE Code LIKE '%_OPT_20%'		1
rtd	OptionTickHistoryTWS	SELECT TickId, Code FROM rtd.QuoteListTWS WHERE Code LIKE '%_OPT_20%'	1	1
rtd	QuotesVFX	SELECT Code FROM rtd.QuoteListVFX		1
rtd	QuoteDayHistoryVFX	SELECT Code FROM rtd.QuoteListVFX		1
rtd	QuoteTimeHistoryVFX	SELECT Code FROM rtd.QuoteListVFX		1
rtd	QuoteTickHistoryVFX	SELECT Code FROM rtd.QuoteListVFX	1	1
rtd	CurrenciesYahoo	SELECT Code AS Symbol FROM rtd.CurrenciesListYahoo		1
rtd	CurrenciesDayHistoryYahoo	SELECT Code AS Symbol FROM rtd.CurrenciesListYahoo		1



rtd	CurrenciesTimeHistoryYahoo	SELECT Code AS Symbol FROM rtd.CurrenciesListYahoo		
rtd	CurrenciesTickHistoryYahoo	SELECT Code AS Symbol FROM rtd.CurrenciesListYahoo	1	1
rtd	CurrenciesMsnMoney	SELECT Code AS Symbol FROM rtd.CurrenciesListMsnMoney		1
rtd	CurrenciesDayHistoryMsnMoney	SELECT Code AS Symbol FROM rtd.CurrenciesListMsnMoney		1
rtd	CurrenciesTimeHistoryMsnMoney	SELECT Code AS Symbol FROM rtd.CurrenciesListMsnMoney		1
rtd	CurrenciesTickHistoryMsnMoney	SELECT Code AS Symbol FROM rtd.CurrenciesListMsnMoney	1	1

## real\_time\_tables Table for MySQL, MariaDB, and PostgreSQL

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY	IS_DISABLED
rtd	fundamentals_day_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_stocks		1
rtd	fundamentals_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_stocks		
rtd	stocks_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_stocks		1
rtd	quotes_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_yahoo		1
rtd	quote_day_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_yahoo		
rtd	quote_time_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_yahoo		1
rtd	quote_tick_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_yahoo	1	1
rtd	quotes_msnmoney	SELECT CODE AS SYMBOL FROM rtd.quote_list_msnmoney		1
rtd	quote_day_history_msnmoney	SELECT CODE AS SYMBOL FROM rtd.quote_list_msnmoney		1
rtd	quote_time_history_msnmoney	SELECT CODE AS SYMBOL FROM rtd.quote_list_msnmoney		1
rtd	quote_tick_history_msnmoney	SELECT CODE AS SYMBOL FROM rtd.quote_list_msnmoney	1	1
rtd	options_yahoo	SELECT CODE FROM rtd.option_list_yahoo		1
rtd	option_day_history_yahoo	SELECT CODE FROM rtd.option_list_yahoo		
rtd	option_tick_history_yahoo	SELECT CODE FROM rtd.option_list_yahoo	1	1
rtd	options_google	SELECT CODE FROM rtd.option_list_google		1
rtd	option_day_history_google	SELECT CODE FROM rtd.option_list_google		1
rtd	option_tick_history_google	SELECT CODE FROM rtd.option_list_google	1	1
rtd	options_msnmoney	SELECT CODE FROM rtd.option_list_msnmoney		1
rtd	option_day_history_msnmoney	SELECT CODE FROM rtd.option_list_msnmoney		1
rtd	option_tick_history_msnmoney	SELECT CODE FROM rtd.option_list_msnmoney	1	1
rtd	quotes_es	SELECT CODE FROM rtd.quote_list_es		1
rtd	quote_day_history_es	SELECT CODE FROM rtd.quote_list_es		1
rtd	quote_time_history_es	SELECT CODE FROM rtd.quote_list_es		1
rtd	quote_tick_history_es	SELECT CODE FROM rtd.quote_list_es	1	1
rtd	quotes_tos	SELECT CODE AS SYMBOL FROM rtd.quote_list_tos		1
rtd	quote_day_history_tos	SELECT CODE AS SYMBOL FROM rtd.quote_list_tos		1
rtd	quote_tick_history_tos	SELECT CODE AS SYMBOL FROM rtd.quote_list_tos	1	1
rtd	options_tos	SELECT CODE FROM rtd.option_list_tos		1
rtd	option_day_history_tos	SELECT CODE FROM rtd.option_list_tos		1
rtd	option_tick_history_tos	SELECT CODE FROM rtd.option_list_tos	1	1
rtd	quotes_tws	SELECT TICK_ID, CODE AS SYMBOL FROM rtd.quote_list_tws WHERE CODE NOT LIKE '%_OPT_20%'		1
rtd	quote_day_history_tws	SELECT TICK_ID, CODE AS SYMBOL FROM rtd.quote_list_tws WHERE CODE NOT LIKE '%_OPT_20%'		1
rtd	quote_tick_history_tws	SELECT TICK_ID, CODE AS SYMBOL FROM rtd.quote_list_tws WHERE CODE NOT LIKE '%_OPT_20%'	1	1
rtd	options_tws	SELECT TICK_ID, CODE FROM rtd.quote_list_tws WHERE CODE LIKE '%_OPT_20%'		1
rtd	option_day_history_tws	SELECT TICK_ID, CODE FROM rtd.quote_list_tws WHERE CODE LIKE '%_OPT_20%'		1
rtd	option_tick_history_tws	SELECT TICK_ID, CODE FROM rtd.quote_list_tws WHERE CODE LIKE '%_OPT_20%'	1	1
rtd	quotes_vfx	SELECT CODE FROM rtd.quote_list_vfx		1
rtd	quote_day_history_vfx	SELECT CODE FROM rtd.quote_list_vfx		1
rtd	quote_time_history_vfx	SELECT CODE FROM rtd.quote_list_vfx		1
rtd	quote_tick_history_vfx	SELECT CODE FROM rtd.quote_list_vfx	1	1
rtd	currencies_yahoo	SELECT CODE AS SYMBOL FROM rtd.currencies_list_yahoo		1
rtd	currencies_day_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.currencies_list_yahoo		1
rtd	currencies_time_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.currencies_list_yahoo		
rtd	currencies_tick_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.currencies_list_yahoo	1	1
rtd	currencies_msnmoney	SELECT CODE AS SYMBOL FROM rtd.currencies_list_msnmoney		1
rtd	currencies_day_history_msnmoney	SELECT CODE AS SYMBOL FROM rtd.currencies_list_msnmoney		1
rtd	currencies_time_history_msnmoney	SELECT CODE AS SYMBOL FROM rtd.currencies_list_msnmoney		1
rtd	currencies_tick_history_msnmoney	SELECT CODE AS SYMBOL FROM rtd.currencies_list_msnmoney	1	1

## REAL\_TIME\_TABLES Table for Oracle Database, IBM DB2, and NuoDB

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY	IS_DISABLED
RTD	FUNDAMENTALS_DAY_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_STOCKS		1
RTD	FUNDAMENTALS_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_STOCKS		
RTD	STOCKS_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_STOCKS		1
RTD	QUOTES_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_YAHOO		1
RTD	QUOTE_DAY_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_YAHOO		
RTD	QUOTE_TIME_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_YAHOO		1
RTD	QUOTE_TICK_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_YAHOO	1	1
RTD	QUOTES_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_MSNMONEY		1
RTD	QUOTE_DAY_HISTORY_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_MSNMONEY		1
RTD	QUOTE_TIME_HISTORY_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_MSNMONEY		1
RTD	QUOTE_TICK_HISTORY_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_MSNMONEY	1	1
RTD	OPTIONS_YAHOO	SELECT CODE FROM RTD.OPTION_LIST_YAHOO		1
RTD	OPTION_DAY_HISTORY_YAHOO	SELECT CODE FROM RTD.OPTION_LIST_YAHOO		
RTD	OPTION_TICK_HISTORY_YAHOO	SELECT CODE FROM RTD.OPTION_LIST_YAHOO	1	1
RTD	OPTIONS_GOOGLE	SELECT CODE FROM RTD.OPTION_LIST_GOOGLE		1
RTD	OPTION_DAY_HISTORY_GOOGLE	SELECT CODE FROM RTD.OPTION_LIST_GOOGLE		1
RTD	OPTION_TICK_HISTORY_GOOGLE	SELECT CODE FROM RTD.OPTION_LIST_GOOGLE	1	1
RTD	OPTIONS_MSNMONEY	SELECT CODE FROM RTD.OPTION_LIST_MSNMONEY		1
RTD	OPTION_DAY_HISTORY_MSNMONEY	SELECT CODE FROM RTD.OPTION_LIST_MSNMONEY		1
RTD	OPTION_TICK_HISTORY_MSNMONEY	SELECT CODE FROM RTD.OPTION_LIST_MSNMONEY	1	1
RTD	QUOTES_ES	SELECT CODE FROM RTD.QUOTE_LIST_ES		1
RTD	QUOTE_DAY_HISTORY_ES	SELECT CODE FROM RTD.QUOTE_LIST_ES		1
RTD	QUOTE_TIME_HISTORY_ES	SELECT CODE FROM RTD.QUOTE_LIST_ES		1
RTD	QUOTE_TICK_HISTORY_ES	SELECT CODE FROM RTD.QUOTE_LIST_ES	1	1
RTD	QUOTES_TOS	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_TOS		1
RTD	QUOTE_DAY_HISTORY_TOS	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_TOS		1
RTD	QUOTE_TICK_HISTORY_TOS	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_TOS	1	1
RTD	OPTIONS_TOS	SELECT CODE FROM RTD.OPTION_LIST_TOS		1
RTD	OPTION_DAY_HISTORY_TOS	SELECT CODE FROM RTD.OPTION_LIST_TOS		1
RTD	OPTION_TICK_HISTORY_TOS	SELECT CODE FROM RTD.OPTION_LIST_TOS	1	1
RTD	QUOTES_TWS	SELECT TICK_ID, CODE AS SYMBOL FROM RTD.QUOTE_LIST_TWS WHERE CODE NOT LIKE '%_OPT_20%'		1
RTD	QUOTE_DAY_HISTORY_TWS	SELECT TICK_ID, CODE AS SYMBOL FROM RTD.QUOTE_LIST_TWS WHERE CODE NOT LIKE '%_OPT_20%'		1
RTD	QUOTE_TICK_HISTORY_TWS	SELECT TICK_ID, CODE AS SYMBOL FROM RTD.QUOTE_LIST_TWS WHERE CODE NOT LIKE '%_OPT_20%'	1	1
RTD	OPTIONS_TWS	SELECT TICK_ID, CODE FROM RTD.QUOTE_LIST_TWS WHERE CODE LIKE '%_OPT_20%'		1
RTD	OPTION_DAY_HISTORY_TWS	SELECT TICK_ID, CODE FROM RTD.QUOTE_LIST_TWS WHERE CODE LIKE '%_OPT_20%'		1
RTD	OPTION_TICK_HISTORY_TWS	SELECT TICK_ID, CODE FROM RTD.QUOTE_LIST_TWS WHERE CODE LIKE '%_OPT_20%'	1	1
RTD	QUOTES_VFX	SELECT CODE FROM RTD.QUOTE_LIST_VFX		1
RTD	QUOTE_DAY_HISTORY_VFX	SELECT CODE FROM RTD.QUOTE_LIST_VFX		1
RTD	QUOTE_TIME_HISTORY_VFX	SELECT CODE FROM RTD.QUOTE_LIST_VFX		1
RTD	QUOTE_TICK_HISTORY_VFX	SELECT CODE FROM RTD.QUOTE_LIST_VFX	1	1
RTD	CURRENCIES_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_MSNMONEY		1
RTD	CURRENCIES_DAY_HISTORY_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_MSNMONEY		1
RTD	CURRENCIES_TIME_HISTORY_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_MSNMONEY		1
RTD	CURRENCIES_TICK_HISTORY_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_MSNMONEY	1	1
RTD	CURRENCIES_YAHOO	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_YAHOO		1
RTD	CURRENCIES_DAY_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_YAHOO		1
RTD	CURRENCIES_TIME_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_YAHOO		
RTD	CURRENCIES_TICK_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_YAHOO	1	1

# Fundamentals Data from Yahoo! Finance

## Overview

The RTD database contains preconfigured tables for getting a lot of fundamentals data from Yahoo! Finance using [RealTimeToExcel](#).

These data are available and activated by default. Just edit required symbols in the QuoteListStocks table.

The data are loaded from Yahoo! Finance for one symbol at once. So you may use all columns without additional overhead.

Yahoo! Finance data are delayed.

Use <http://finance.yahoo.com/> to find tickers.

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	FundamentalsYahoo	SELECT Code AS Symbol FROM rtd.QuoteListStocks	
rtd	FundamentalsDayHistoryYahoo	SELECT Code AS Symbol FROM rtd.QuoteListStocks	

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	fundamentals_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_stocks	
rtd	fundamentals_day_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_stocks	

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	FUNDAMENTALS_DAY_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_STOCKS	
RTD	FUNDAMENTALS_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_STOCKS	

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.QuoteListStocks for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
AAPL
GOOG

rtd.quote\_list\_stocks for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
AAPL
GOOG

Use <http://finance.yahoo.com/> to find tickers.

### Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	FundamentalsYahoo	Symbol		PK
rtd	FundamentalsDayHistoryYahoo	Symbol		PK
rtd	FundamentalsDayHistoryYahoo	LastTradeDate	=RTD("gartle.rtd",,"YahooFinanceQuotes", [Symbol],"LastTradeDate")	PK

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	fundamentals_yahoo	SYMBOL		PK
rtd	fundamentals_day_history_yahoo	SYMBOL		PK
rtd	fundamentals_day_history_yahoo	LAST_TRADE_DATE	=RTD("gartle.rtd",,"YahooFinanceQuotes",	PK

		[SYMBOL,"LastTradeDate")	
--	--	--------------------------	--

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	FUNDAMENTALS_YAHOO	SYMBOL		PK
RTD	FUNDAMENTALS_DAY_HISTORY_YAHOO	SYMBOL		PK
RTD	FUNDAMENTALS_DAY_HISTORY_YAHOO	LAST_TRADE_DATE	=RTD("gartle.rtd",,"YahooFinanceQuotes", [SYMBOL],"LastTradeDate")	PK

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rdt.FundamentalsYahoo

The table contains the last values of fundamentals data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol		PK
LastTradeDate	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeInPercent")	
Open	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Low")	
Volume	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Volume")	
DaysRange	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"DaysRange")	
PrevClose	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PreviousClose")	
ShortRatio	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ShortRatio")	
YearHigh	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"YearHigh")	
YearLow	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"YearLow")	
YearRange	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"YearRange")	
ChangeFromYearHigh	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeFromYearHigh")	
ChangeFromYearLow	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeFromYearLow")	
PercentChangeFromYearHigh	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PercentChangeFromYearHigh")	
PercentChangeFromYearLow	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PercentChangeFromYearLow")	
MA50	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"FiftydayMovingAverage")	
MA200	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"TwoHundredDayMovingAverage")	
ChangeFromMA50	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeFromFiftyDayMovingAverage")	
ChangeFromMA200	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeFromTwoHundredDayMovingAverage")	
PercentChangeFromMA50	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PercentChangeFromFiftyDayMovingAverage")	
PercentChangeFromMA200	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PercentChangeFromTwoHundredDayMovingAverage")	
AverageDailyVolume	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"AverageDailyVolume")	
OneYearTargetPrice	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"OneYrTargetPrice")	
PE	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PERatio")	
PEG	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PEGRatio")	
EPSEstCurrentYear	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EPSEstimateCurrentYear")	
EPSEstNextQuarter	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EPSEstimateNextQuarter")	
EPSEstNextYear	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EPSEstimateNextYear")	
EarningsShare	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EarningsShare")	
MarketCap	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"MarketCapitalization")	
DividendYield	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"DividendYield")	
DividendShare	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"DividendShare")	
ExDividendDate	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ExDividendDate")	
DividendPayDate	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"DividendPayDate")	
BookValue	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"BookValue")	
PriceBook	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PriceBook")	
PriceSales	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PriceSales")	
PriceEPSEstCurrentYear	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PriceEPSEstimateCurrentYear")	
PriceEPSEstNextYear	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PriceEPSEstimateNextYear")	
EBITDA	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EBITDA")	
CompanyName	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Name")	
StockExchange	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"StockExchange")	
Commission	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Commission")	
Notes	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Notes")	
LastUpdateTimeStamp		

## rtd.FundamentalsDayHistoryYahoo

The table contains day history of fundamentals data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol		PK
LastTradeDate	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"LastTradeDate")	PK
LastTradeTime	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeInPercent")	
Open	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Low")	
Volume	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Volume")	
DaysRange	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"DaysRange")	
PrevClose	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PreviousClose")	
ShortRatio	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ShortRatio")	
YearHigh	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"YearHigh")	
YearLow	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"YearLow")	
YearRange	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"YearRange")	
ChangeFromYearHigh	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeFromYearHigh")	
ChangeFromYearLow	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeFromYearLow")	
PercentChangeFromYearHigh	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PercentChangeFromYearHigh")	
PercentChangeFromYearLow	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PercentChangeFromYearLow")	
MA50	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"FiftydayMovingAverage")	
MA200	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"TwoHundredDayMovingAverage")	
ChangeFromMA50	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeFromFiftyDayMovingAverage")	
ChangeFromMA200	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ChangeFromTwoHundredDayMovingAverage")	
PercentChangeFromMA50	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PercentChangeFromFiftyDayMovingAverage")	
PercentChangeFromMA200	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PercentChangeFromTwoHundredDayMovingAverage")	
AverageDailyVolume	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"AverageDailyVolume")	
OneYearTargetPrice	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"OneYrTargetPrice")	
PE	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PERatio")	
PEG	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PEGRatio")	
EPSEstCurrentYear	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EPSEstimateCurrentYear")	
EPSEstNextQuarter	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EPSEstimateNextQuarter")	
EPSEstNextYear	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EPSEstimateNextYear")	
EarningsShare	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EarningsShare")	
MarketCap	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"MarketCapitalization")	
DividendYield	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"DividendYield")	
DividendShare	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"DividendShare")	
ExDividendDate	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"ExDividendDate")	
DividendPayDate	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"DividendPayDate")	
BookValue	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"BookValue")	
PriceBook	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PriceBook")	
PriceSales	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PriceSales")	
PriceEPSEstCurrentYear	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PriceEPSEstimateCurrentYear")	
PriceEPSEstNextYear	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"PriceEPSEstimateNextYear")	
EBITDA	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"EBITDA")	
CompanyName	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Name")	
StockExchange	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"StockExchange")	
Commission	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Commission")	
Notes	=RTD("gartle.rtd",,"YahooFinanceQuotes",[Symbol],"Notes")	
LastUpdateTimeStamp		

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.fundamentals\_yahoo

The table contains the last values of fundamentals data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL		PK
LAST_TRADE_DATE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"LastTradeDate")	
LAST_TRADE_TIME	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"LastTradeTime")	
LAST	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"ChangeInPercent")	
OPEN	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"Low")	
VOLUME	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"Volume")	
DAYS_RANGE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"DaysRange")	
PREV_CLOSE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PreviousClose")	
SHORT_RATIO	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"ShortRatio")	
YEAR_HIGH	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"YearHigh")	
YEAR_LOW	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"YearLow")	
YEAR_RANGE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"YearRange")	
CHANGE_FROM_YEAR_HIGH	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"ChangeFromYearHigh")	
CHANGE_FROM_YEAR_LOW	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"ChangeFromYearLow")	
PERCENT_CHANGE_FROM_YEAR_HIGH	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PercentChangeFromYearHigh")	
PERCENT_CHANGE_FROM_YEAR_LOW	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PercentChangeFromYearLow")	
MA50	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"FiftydayMovingAverage")	
MA200	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"TwoHundredDayMovingAverage")	
CHANGE_FROM_MA50	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"ChangeFromFiftyDayMovingAverage")	
CHANGE_FROM_MA200	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"ChangeFromTwoHundredDayMovingAverage")	
PERCENT_CHANGE_FROM_MA50	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PercentChangeFromFiftyDayMovingAverage")	
PERCENT_CHANGE_FROM_MA200	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PercentChangeFromTwoHundredDayMovingAverage")	
AVERAGE_DAILY_VOLUME	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"AverageDailyVolume")	
ONE_YEAR_TARGET_PRICE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"OneYrTargetPrice")	
PE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PERatio")	
PEG	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PEGRatio")	
EPS_EST_CURRENT_YEAR	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"EPSEstimateCurrentYear")	
EPS_EST_NEXT_QUARTER	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"EPSEstimateNextQuarter")	
EPS_EST_NEXT_YEAR	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"EPSEstimateNextYear")	
EARNINGS_SHARE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"EarningsShare")	
MARKET_CAP	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"MarketCapitalization")	
DIVIDEND_YIELD	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"DividendYield")	
DIVIDEND_SHARE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"DividendShare")	
EX_DIVIDEND_DATE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"ExDividendDate")	
DIVIDEND_PAY_DATE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"DividendPayDate")	
BOOK_VALUE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"BookValue")	
PRICE_BOOK	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PriceBook")	
PRICE_SALES	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PriceSales")	
PRICE_EPS_EST_CURRENT_YEAR	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PriceEPSEstimateCurrentYear")	
PRICE_EPS_EST_NEXT_YEAR	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"PriceEPSEstimateNextYear")	
EBITDA	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"EBITDA")	
COMPANY_NAME	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"Name")	
STOCK_EXCHANGE	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"StockExchange")	
COMMISSION	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"Commission")	
NOTES	=RTD("gartle.rtd", "YahooFinanceQuotes",[SYMBOL],"Notes")	
LAST_UPDATE_TIMESTAMP		



## rtd.fundamentals\_day\_history\_yahoo

The table contains day history of fundamentals data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL		PK
LAST_TRADE_DATE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"LastTradeDate")	PK
LAST_TRADE_TIME	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"LastTradeTime")	
LAST	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"ChangeInPercent")	
OPEN	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"Low")	
VOLUME	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"Volume")	
DAYS_RANGE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"DaysRange")	
PREV_CLOSE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PreviousClose")	
SHORT_RATIO	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"ShortRatio")	
YEAR_HIGH	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"YearHigh")	
YEAR_LOW	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"YearLow")	
YEAR_RANGE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"YearRange")	
CHANGE_FROM_YEAR_HIGH	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"ChangeFromYearHigh")	
CHANGE_FROM_YEAR_LOW	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"ChangeFromYearLow")	
PERCENT_CHANGE_FROM_YEAR_HIGH	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PercentChangeFromYearHigh")	
PERCENT_CHANGE_FROM_YEAR_LOW	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PercentChangeFromYearLow")	
MA50	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"FiftydayMovingAverage")	
MA200	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"TwoHundredDayMovingAverage")	
CHANGE_FROM_MA50	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"ChangeFromFiftyDayMovingAverage")	
CHANGE_FROM_MA200	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"ChangeFromTwoHundredDayMovingAverage")	
PERCENT_CHANGE_FROM_MA50	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PercentChangeFromFiftyDayMovingAverage")	
PERCENT_CHANGE_FROM_MA200	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PercentChangeFromTwoHundredDayMovingAverage")	
AVERAGE_DAILY_VOLUME	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"AverageDailyVolume")	
ONE_YEAR_TARGET_PRICE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"OneYrTargetPrice")	
PE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PERatio")	
PEG	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PEGRatio")	
EPS_EST_CURRENT_YEAR	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"EPSEstimateCurrentYear")	
EPS_EST_NEXT_QUARTER	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"EPSEstimateNextQuarter")	
EPS_EST_NEXT_YEAR	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"EPSEstimateNextYear")	
EARNINGS_SHARE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"EarningsShare")	
MARKET_CAP	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"MarketCapitalization")	
DIVIDEND_YIELD	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"DividendYield")	
DIVIDEND_SHARE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"DividendShare")	
EX_DIVIDEND_DATE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"ExDividendDate")	
DIVIDEND_PAY_DATE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"DividendPayDate")	
BOOK_VALUE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"BookValue")	
PRICE_BOOK	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PriceBook")	
PRICE_SALES	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PriceSales")	
PRICE_EPS_EST_CURRENT_YEAR	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PriceEPSEstimateCurrentYear")	
PRICE_EPS_EST_NEXT_YEAR	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"PriceEPSEstimateNextYear")	
EBITDA	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"EBITDA")	
COMPANY_NAME	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"Name")	
STOCK_EXCHANGE	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"StockExchange")	
COMMISSION	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"Commission")	
NOTES	=RTD("gartle.rtd","YahooFinanceQuotes",[SYMBOL],"Notes")	
LAST_UPDATE_TIMESTAMP		



# Quotes from eSignal FutureSource

## Overview

The RTD database contains preconfigured tables for getting real-time data from [eSignal FutureSource](#).

Quote tables are designed for getting data for stocks and futures.

The data are updated from the FutureSource RTD server.

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	QuoteListES		
rtd	QuotesES	SELECT Code FROM rtd.QuoteListES	
rtd	QuoteDayHistoryES	SELECT Code FROM rtd.QuoteListES	
rtd	QuoteTimeHistoryES	SELECT Code FROM rtd.QuoteListES	
rtd	QuoteTickHistoryES	SELECT Code FROM rtd.QuoteListES	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	quote_list_es		
rtd	quotes_es	SELECT CODE FROM rtd.quote_list_es	
rtd	quote_day_history_es	SELECT CODE FROM rtd.quote_list_es	
rtd	quote_time_history_es	SELECT CODE FROM rtd.quote_list_es	
rtd	quote_tick_history_es	SELECT CODE FROM rtd.quote_list_es	1

Oracle Database, IBM DB2, and NuoDB:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	QUOTE_LIST_ES		
RTD	QUOTES_ES	SELECT CODE FROM RTD.QUOTE_LIST_ES	
RTD	QUOTE_DAY_HISTORY_ES	SELECT CODE FROM RTD.QUOTE_LIST_ES	
RTD	QUOTE_TIME_HISTORY_ES	SELECT CODE FROM RTD.QUOTE_LIST_ES	
RTD	QUOTE_TICK_HISTORY_ES	SELECT CODE FROM RTD.QUOTE_LIST_ES	1

\* Click on the table name to go to the table description.

## Task Table Examples

rtd.QuoteListES for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
AAPL
GOOG

rtd.quote\_list\_es for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL:

CODE
AAPL
GOOG

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	QuotesES	Code		Formula
rtd	QuotesES	Symbol	=RTD("esrtd",,[Code],"Symbol")	PK
rtd	QuoteDayHistoryES	Code		Formula
rtd	QuoteDayHistoryES	Symbol	=RTD("esrtd",,[Code],"Symbol")	PK
rtd	QuoteDayHistoryES	Date	=Date()	PK
rtd	QuoteTimeHistoryES	Code		Formula
rtd	QuoteTimeHistoryES	Symbol	=RTD("esrtd",,[Code],"Symbol")	PK

rtd	QuoteTimeHistoryES	Date	=Date()	PK
rtd	QuoteTimeHistoryES	Time	=RTD("esrtd",,[Code],"Time")	PK
rtd	QuoteTickHistoryES	Code		Formula
rtd	QuoteTickHistoryES	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	quotes_es	CODE		Formula
rtd	quotes_es	SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	PK
rtd	quote_day_history_es	CODE		Formula
rtd	quote_day_history_es	SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	PK
rtd	quote_day_history_es	DATE	=Date()	PK
rtd	quote_time_history_es	CODE		Formula
rtd	quote_time_history_es	SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	PK
rtd	quote_time_history_es	DATE	=Date()	PK
rtd	quote_time_history_es	TIME	=RTD("esrtd",,[CODE],"Time")	PK
rtd	quote_tick_history_es	CODE		Formula
rtd	quote_tick_history_es	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	QUOTES_ES	CODE		Formula
RTD	QUOTES_ES	SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	PK
RTD	QUOTE_DAY_HISTORY_ES	CODE		Formula
RTD	QUOTE_DAY_HISTORY_ES	SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	PK
RTD	QUOTE_DAY_HISTORY_ES	DATE	=Date()	PK
RTD	QUOTE_TICK_HISTORY_ES	CODE		Formula
RTD	QUOTE_TICK_HISTORY_ES	ID		PK, IDENTITY
RTD	QUOTE_TIME_HISTORY_ES	CODE		Formula
RTD	QUOTE_TIME_HISTORY_ES	SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	PK
RTD	QUOTE_TIME_HISTORY_ES	DATE	=Date()	PK
RTD	QUOTE_TIME_HISTORY_ES	TIME	=RTD("esrtd",,[CODE],"Time")	PK

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.QuotesES

The table contains the last data values of stocks and futures from eSignal FutureSource.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		Formula
Symbol	=RTD("esrtd",,[Code],"Symbol")	PK
Date	=Date()	
Time	=RTD("esrtd",,[Code],"Time")	
Last	=RTD("esrtd",,[Code],"Last")	
Change	=RTD("esrtd",,[Code],"Change")	
PercentChange	=RTD("esrtd",,[Code],"% Change")	
Bid	=RTD("esrtd",,[Code],"Bid")	
Ask	=RTD("esrtd",,[Code],"Ask")	
BidSize	=RTD("esrtd",,[Code],"Bid Size")	
AskSize	=RTD("esrtd",,[Code],"Ask Size")	
Open	=RTD("esrtd",,[Code],"Open")	
High	=RTD("esrtd",,[Code],"High")	
Low	=RTD("esrtd",,[Code],"Low")	
Volume	=RTD("esrtd",,[Code],"Volume")	
OpenInt	=RTD("esrtd",,[Code],"OpenInt")	
TradePrice	=RTD("esrtd",,[Code],"TradePrice")	
LastUpdateTimeStamp		

## rtd.QuoteDayHistoryES

The table contains day data history of stocks and futures from eSignal FutureSource.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		Formula
Symbol	=RTD("esrtd",,[Code],"Symbol")	PK
Date	=Date()	PK
Time	=RTD("esrtd",,[Code],"Time")	
Last	=RTD("esrtd",,[Code],"Last")	
Change	=RTD("esrtd",,[Code],"Change")	
PercentChange	=RTD("esrtd",,[Code],"% Change")	
Bid	=RTD("esrtd",,[Code],"Bid")	
Ask	=RTD("esrtd",,[Code],"Ask")	
BidSize	=RTD("esrtd",,[Code],"Bid Size")	
AskSize	=RTD("esrtd",,[Code],"Ask Size")	
Open	=RTD("esrtd",,[Code],"Open")	
High	=RTD("esrtd",,[Code],"High")	
Low	=RTD("esrtd",,[Code],"Low")	
Volume	=RTD("esrtd",,[Code],"Volume")	
OpenInt	=RTD("esrtd",,[Code],"OpenInt")	
TradePrice	=RTD("esrtd",,[Code],"TradePrice")	
LastUpdateTimeStamp		

## rtd.QuoteTimeHistoryES

The table contains time data history of stocks and futures from eSignal FutureSource.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		Formula
Symbol	=RTD("esrtd",,[Code],"Symbol")	PK
Date	=Date()	PK
Time	=RTD("esrtd",,[Code],"Time")	PK
Last	=RTD("esrtd",,[Code],"Last")	
Change	=RTD("esrtd",,[Code],"Change")	
PercentChange	=RTD("esrtd",,[Code],"% Change")	
Bid	=RTD("esrtd",,[Code],"Bid")	
Ask	=RTD("esrtd",,[Code],"Ask")	
BidSize	=RTD("esrtd",,[Code],"Bid Size")	
AskSize	=RTD("esrtd",,[Code],"Ask Size")	
Open	=RTD("esrtd",,[Code],"Open")	
High	=RTD("esrtd",,[Code],"High")	
Low	=RTD("esrtd",,[Code],"Low")	
Volume	=RTD("esrtd",,[Code],"Volume")	
OpenInt	=RTD("esrtd",,[Code],"OpenInt")	
TradePrice	=RTD("esrtd",,[Code],"TradePrice")	
LastUpdateTimeStamp		

## rtd.QuoteTickHistoryES

The table contains tick data history of stocks and futures from eSignal FutureSource.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		Formula
ID		PK, IDENTITY
Symbol	=RTD("esrtd",,[Code],"Symbol")	
Date	=Date()	
Time	=RTD("esrtd",,[Code],"Time")	
Last	=RTD("esrtd",,[Code],"Last")	
Change	=RTD("esrtd",,[Code],"Change")	
PercentChange	=RTD("esrtd",,[Code],"% Change")	
Bid	=RTD("esrtd",,[Code],"Bid")	
Ask	=RTD("esrtd",,[Code],"Ask")	
BidSize	=RTD("esrtd",,[Code],"Bid Size")	
AskSize	=RTD("esrtd",,[Code],"Ask Size")	
Open	=RTD("esrtd",,[Code],"Open")	
High	=RTD("esrtd",,[Code],"High")	

Low	=RTD("esrtd",,[Code],"Low")	
Volume	=RTD("esrtd",,[Code],"Volume")	
OpenInt	=RTD("esrtd",,[Code],"OpenInt")	
TradePrice	=RTD("esrtd",,[Code],"TradePrice")	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

The table contains the last data values of stocks and futures from eSignal FutureSource.

### rtd.quotes\_es

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		Formula
SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	PK
DATE	=Date()	
TIME	=RTD("esrtd",,[CODE],"Time")	
LAST	=RTD("esrtd",,[CODE],"Last")	
CHANGE	=RTD("esrtd",,[CODE],"Change")	
PERCENT_CHANGE	=RTD("esrtd",,[CODE],"% Change")	
BID	=RTD("esrtd",,[CODE],"Bid")	
ASK	=RTD("esrtd",,[CODE],"Ask")	
BID_SIZE	=RTD("esrtd",,[CODE],"Bid Size")	
ASK_SIZE	=RTD("esrtd",,[CODE],"Ask Size")	
OPEN	=RTD("esrtd",,[CODE],"Open")	
HIGH	=RTD("esrtd",,[CODE],"High")	
LOW	=RTD("esrtd",,[CODE],"Low")	
VOLUME	=RTD("esrtd",,[CODE],"Volume")	
OPEN_INT	=RTD("esrtd",,[CODE],"OpenInt")	
TRADE_PRICE	=RTD("esrtd",,[CODE],"TradePrice")	
LAST_UPDATE_TIMESTAMP		

### rtd.quote\_day\_history\_es

The table contains day data history of stocks and futures from eSignal FutureSource.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		Formula
SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	PK
DATE	=Date()	PK
TIME	=RTD("esrtd",,[CODE],"Time")	
LAST	=RTD("esrtd",,[CODE],"Last")	
CHANGE	=RTD("esrtd",,[CODE],"Change")	
PERCENT_CHANGE	=RTD("esrtd",,[CODE],"% Change")	
BID	=RTD("esrtd",,[CODE],"Bid")	
ASK	=RTD("esrtd",,[CODE],"Ask")	
BID_SIZE	=RTD("esrtd",,[CODE],"Bid Size")	
ASK_SIZE	=RTD("esrtd",,[CODE],"Ask Size")	
OPEN	=RTD("esrtd",,[CODE],"Open")	
HIGH	=RTD("esrtd",,[CODE],"High")	
LOW	=RTD("esrtd",,[CODE],"Low")	
VOLUME	=RTD("esrtd",,[CODE],"Volume")	
OPEN_INT	=RTD("esrtd",,[CODE],"OpenInt")	
TRADE_PRICE	=RTD("esrtd",,[CODE],"TradePrice")	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_time\_history\_es

The table contains time data history of stocks and futures from eSignal FutureSource.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		Formula
SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	PK
DATE	=Date()	PK
TIME	=RTD("esrtd",,[CODE],"Time")	PK
LAST	=RTD("esrtd",,[CODE],"Last")	
CHANGE	=RTD("esrtd",,[CODE],"Change")	
PERCENT_CHANGE	=RTD("esrtd",,[CODE],"% Change")	
BID	=RTD("esrtd",,[CODE],"Bid")	
ASK	=RTD("esrtd",,[CODE],"Ask")	
BID_SIZE	=RTD("esrtd",,[CODE],"Bid Size")	
ASK_SIZE	=RTD("esrtd",,[CODE],"Ask Size")	
OPEN	=RTD("esrtd",,[CODE],"Open")	
HIGH	=RTD("esrtd",,[CODE],"High")	
LOW	=RTD("esrtd",,[CODE],"Low")	
VOLUME	=RTD("esrtd",,[CODE],"Volume")	
OPEN_INT	=RTD("esrtd",,[CODE],"OpenInt")	
TRADE_PRICE	=RTD("esrtd",,[CODE],"TradePrice")	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_tick\_history\_es

The table contains tick data history of stocks and futures from eSignal FutureSource.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		Formula
ID		PK, IDENTITY
SYMBOL	=RTD("esrtd",,[CODE],"Symbol")	
DATE	=Date()	
TIME	=RTD("esrtd",,[CODE],"Time")	
LAST	=RTD("esrtd",,[CODE],"Last")	
CHANGE	=RTD("esrtd",,[CODE],"Change")	
PERCENT_CHANGE	=RTD("esrtd",,[CODE],"% Change")	
BID	=RTD("esrtd",,[CODE],"Bid")	
ASK	=RTD("esrtd",,[CODE],"Ask")	
BID_SIZE	=RTD("esrtd",,[CODE],"Bid Size")	
ASK_SIZE	=RTD("esrtd",,[CODE],"Ask Size")	
OPEN	=RTD("esrtd",,[CODE],"Open")	
HIGH	=RTD("esrtd",,[CODE],"High")	
LOW	=RTD("esrtd",,[CODE],"Low")	
VOLUME	=RTD("esrtd",,[CODE],"Volume")	
OPEN_INT	=RTD("esrtd",,[CODE],"OpenInt")	
TRADE_PRICE	=RTD("esrtd",,[CODE],"TradePrice")	

# Quotes from Thinkorswim thinkDesktop via TOS.RTD

## Overview

The RTD database contains preconfigured tables for getting real-time data from [Thinkorswim thinkDesktop](#).

Quote tables are designed for getting data for stocks, futures, and currency pairs. Use option tables for options.

Since RealTimeToDB 2.5, RTD functions are used by default.

To update existing DDE formulas, you may use patches from the database folders.

You may disable unusable columns to reduce the server overhead.

Note that Thinkorswim thinkDesktop can crash if more than 200 000 topics are being requested.

The RTD server does not contain an actual data time field.

The DateTime, Date, and Time fields are updated using the PC time adjusted to the table time zone (Eastern Standard Time).

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	QuoteListTOS		
rtd	QuotesTOS	SELECT Code AS Symbol FROM rtd.QuoteListTOS	
rtd	QuoteDayHistoryTOS	SELECT Code AS Symbol FROM rtd.QuoteListTOS	
rtd	QuoteTickHistoryTOS	SELECT Code AS Symbol FROM rtd.QuoteListTOS	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	quote_list_tos		
rtd	quotes_tos	SELECT CODE AS SYMBOL FROM rtd.quote_list_tos	
rtd	quote_day_history_tos	SELECT CODE AS SYMBOL FROM rtd.quote_list_tos	
rtd	quote_tick_history_tos	SELECT CODE AS SYMBOL FROM rtd.quote_list_tos	1

Oracle Database, IBM DB2, and NuoDB:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	QUOTE_LIST_TOS		
RTD	QUOTES_TOS	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_TOS	
RTD	QUOTE_DAY_HISTORY_TOS	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_TOS	
RTD	QUOTE_TICK_HISTORY_TOS	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_TOS	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.QuoteListTOS for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
AAPL
GOOG

rtd.quote\_list\_tos for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL:

CODE
AAPL
GOOG

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	QuotesTOS	Symbol		PK
rtd	QuoteDayHistoryTOS	Symbol		PK
rtd	QuoteDayHistoryTOS	Date	=Date()	PK
rtd	QuoteTickHistoryTOS	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	quotes_tos	SYMBOL		PK
rtd	quote_day_history_tos	SYMBOL		PK
rtd	quote_day_history_tos	DATE	=Date()	PK
rtd	quote_tick_history_tos	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	QUOTES_TOS	SYMBOL		PK
RTD	QUOTE_DAY_HISTORY_TOS	SYMBOL		PK
RTD	QUOTE_DAY_HISTORY_TOS	DATE	=Date()	PK
RTD	QUOTE_TICK_HISTORY_TOS	ID		PK, IDENTITY

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.QuotesTOS

The table contains the last data values of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol		PK
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Description	=RTD("tos.rtd",,"DESCRIPTION",[Symbol])	
Last	=RTD("tos.rtd",,"LAST",[Symbol])	
Change	=RTD("tos.rtd",,"NET_CHANGE",[Symbol])	
PercentChange	=RTD("tos.rtd",,"PERCENT_CHANGE",[Symbol])	
LastSize	=RTD("tos.rtd",,"LAST_SIZE",[Symbol])	
LastX	=RTD("tos.rtd",,"LX",[Symbol])	
Mark	=RTD("tos.rtd",,"MARK",[Symbol])	
MarkChange	=RTD("tos.rtd",,"MARK_CHANGE",[Symbol])	
MarkPercentChange	=RTD("tos.rtd",,"MARK_PERCENT_CHANGE",[Symbol])	
Bid	=RTD("tos.rtd",,"BID",[Symbol])	
Ask	=RTD("tos.rtd",,"ASK",[Symbol])	
BidSize	=RTD("tos.rtd",,"BID_SIZE",[Symbol])	
AskSize	=RTD("tos.rtd",,"ASK_SIZE",[Symbol])	
BidAskSize	=RTD("tos.rtd",,"BA_SIZE",[Symbol])	
BidX	=RTD("tos.rtd",,"BX",[Symbol])	
AskX	=RTD("tos.rtd",,"AX",[Symbol])	
StrengthMeter	=RTD("tos.rtd",,"STRENGTH_METER",[Symbol])	
Open	=RTD("tos.rtd",,"OPEN",[Symbol])	
High	=RTD("tos.rtd",,"HIGH",[Symbol])	
Low	=RTD("tos.rtd",,"LOW",[Symbol])	
Close	=RTD("tos.rtd",,"CLOSE",[Symbol])	
Volume	=RTD("tos.rtd",,"VOLUME",[Symbol])	
OpenInt	=RTD("tos.rtd",,"OPEN_INT",[Symbol])	
ImpliedVol	=RTD("tos.rtd",,"IMPL_VOL",[Symbol])	
VolIndex	=RTD("tos.rtd",,"VOL_INDEX",[Symbol])	
FrontVol	=RTD("tos.rtd",,"FRONT_VOL",[Symbol])	
BackVol	=RTD("tos.rtd",,"BACK_VOL",[Symbol])	
WeightedBackVol	=RTD("tos.rtd",,"WEIGHTED_BACK_VOL",[Symbol])	
VolDiff	=RTD("tos.rtd",,"VOL_DIFF",[Symbol])	
PutCallRatio	=RTD("tos.rtd",,"PUT_CALL_RATIO",[Symbol])	
CallVolumeIndex	=RTD("tos.rtd",,"CALL_VOLUME_INDEX",[Symbol])	
PutVolumeIndex	=RTD("tos.rtd",,"PUT_VOLUME_INDEX",[Symbol])	
OptionVolumeIndex	=RTD("tos.rtd",,"OPTION_VOLUME_INDEX",[Symbol])	
FrontExpectedMove	=RTD("tos.rtd",,"FRONT_EX_MOVE",[Symbol])	
BackExpectedMove	=RTD("tos.rtd",,"BACK_EX_MOVE",[Symbol])	
ExpectedMoveDiff	=RTD("tos.rtd",,"EX_MOVE_DIFF",[Symbol])	
Beta	=RTD("tos.rtd",,"BETA",[Symbol])	
High52	=RTD("tos.rtd",,"52HIGH",[Symbol])	
Low52	=RTD("tos.rtd",,"52LOW",[Symbol])	
PE	=RTD("tos.rtd",,"PE",[Symbol])	
EPS	=RTD("tos.rtd",,"EPS",[Symbol])	
MarketCap	=RTD("tos.rtd",,"MARKET_CAP",[Symbol])	
Shares	=RTD("tos.rtd",,"SHARES",[Symbol])	
DividendYield	=RTD("tos.rtd",,"YIELD",[Symbol])	
DividendShare	=RTD("tos.rtd",,"DIV",[Symbol])	
LastUpdateTimeStamp		



## rtd.QuoteDayHistoryTOS

The table contains day data history of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol		PK
Date	=Date()	PK
Time	=Time()	
Description	=RTD("tos.rtd",,"DESCRIPTION",[Symbol])	
Last	=RTD("tos.rtd",,"LAST",[Symbol])	
Change	=RTD("tos.rtd",,"NET_CHANGE",[Symbol])	
PercentChange	=RTD("tos.rtd",,"PERCENT_CHANGE",[Symbol])	
LastSize	=RTD("tos.rtd",,"LAST_SIZE",[Symbol])	
LastX	=RTD("tos.rtd",,"LX",[Symbol])	
Mark	=RTD("tos.rtd",,"MARK",[Symbol])	
MarkChange	=RTD("tos.rtd",,"MARK_CHANGE",[Symbol])	
MarkPercentChange	=RTD("tos.rtd",,"MARK_PERCENT_CHANGE",[Symbol])	
Bid	=RTD("tos.rtd",,"BID",[Symbol])	
Ask	=RTD("tos.rtd",,"ASK",[Symbol])	
BidSize	=RTD("tos.rtd",,"BID_SIZE",[Symbol])	
AskSize	=RTD("tos.rtd",,"ASK_SIZE",[Symbol])	
BidAskSize	=RTD("tos.rtd",,"BA_SIZE",[Symbol])	
BidX	=RTD("tos.rtd",,"BX",[Symbol])	
AskX	=RTD("tos.rtd",,"AX",[Symbol])	
StrengthMeter	=RTD("tos.rtd",,"STRENGTH_METER",[Symbol])	
Open	=RTD("tos.rtd",,"OPEN",[Symbol])	
High	=RTD("tos.rtd",,"HIGH",[Symbol])	
Low	=RTD("tos.rtd",,"LOW",[Symbol])	
Close	=RTD("tos.rtd",,"CLOSE",[Symbol])	
Volume	=RTD("tos.rtd",,"VOLUME",[Symbol])	
OpenInt	=RTD("tos.rtd",,"OPEN_INT",[Symbol])	
ImpliedVol	=RTD("tos.rtd",,"IMPL_VOL",[Symbol])	
VolIndex	=RTD("tos.rtd",,"VOL_INDEX",[Symbol])	
FrontVol	=RTD("tos.rtd",,"FRONT_VOL",[Symbol])	
BackVol	=RTD("tos.rtd",,"BACK_VOL",[Symbol])	
WeightedBackVol	=RTD("tos.rtd",,"WEIGHTED_BACK_VOL",[Symbol])	
VolDiff	=RTD("tos.rtd",,"VOL_DIFF",[Symbol])	
PutCallRatio	=RTD("tos.rtd",,"PUT_CALL_RATIO",[Symbol])	
CallVolumeIndex	=RTD("tos.rtd",,"CALL_VOLUME_INDEX",[Symbol])	
PutVolumeIndex	=RTD("tos.rtd",,"PUT_VOLUME_INDEX",[Symbol])	
OptionVolumeIndex	=RTD("tos.rtd",,"OPTION_VOLUME_INDEX",[Symbol])	
FrontExpectedMove	=RTD("tos.rtd",,"FRONT_EX_MOVE",[Symbol])	
BackExpectedMove	=RTD("tos.rtd",,"BACK_EX_MOVE",[Symbol])	
ExpectedMoveDiff	=RTD("tos.rtd",,"EX_MOVE_DIFF",[Symbol])	
Beta	=RTD("tos.rtd",,"BETA",[Symbol])	
High52	=RTD("tos.rtd",,"52HIGH",[Symbol])	
Low52	=RTD("tos.rtd",,"52LOW",[Symbol])	
PE	=RTD("tos.rtd",,"PE",[Symbol])	
EPS	=RTD("tos.rtd",,"EPS",[Symbol])	
MarketCap	=RTD("tos.rtd",,"MARKET_CAP",[Symbol])	
Shares	=RTD("tos.rtd",,"SHARES",[Symbol])	
DividendYield	=RTD("tos.rtd",,"YIELD",[Symbol])	
DividendShare	=RTD("tos.rtd",,"DIV",[Symbol])	
LastUpdateTimeStamp		

## rtd.QuoteTickHistoryTOS

The table contains tick data history of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Symbol		
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Description	=RTD("tos.rtd", "DESCRIPTION",[Symbol])	
Last	=RTD("tos.rtd", "LAST",[Symbol])	
Change	=RTD("tos.rtd", "NET_CHANGE",[Symbol])	
PercentChange	=RTD("tos.rtd", "PERCENT_CHANGE",[Symbol])	
LastSize	=RTD("tos.rtd", "LAST_SIZE",[Symbol])	
LastX	=RTD("tos.rtd", "LX",[Symbol])	
Mark	=RTD("tos.rtd", "MARK",[Symbol])	
MarkChange	=RTD("tos.rtd", "MARK_CHANGE",[Symbol])	
MarkPercentChange	=RTD("tos.rtd", "MARK_PERCENT_CHANGE",[Symbol])	
Bid	=RTD("tos.rtd", "BID",[Symbol])	
Ask	=RTD("tos.rtd", "ASK",[Symbol])	
BidSize	=RTD("tos.rtd", "BID_SIZE",[Symbol])	
AskSize	=RTD("tos.rtd", "ASK_SIZE",[Symbol])	
BidAskSize	=RTD("tos.rtd", "BA_SIZE",[Symbol])	
BidX	=RTD("tos.rtd", "BX",[Symbol])	
AskX	=RTD("tos.rtd", "AX",[Symbol])	
StrengthMeter	=RTD("tos.rtd", "STRENGTH_METER",[Symbol])	
Open	=RTD("tos.rtd", "OPEN",[Symbol])	
High	=RTD("tos.rtd", "HIGH",[Symbol])	
Low	=RTD("tos.rtd", "LOW",[Symbol])	
Close	=RTD("tos.rtd", "CLOSE",[Symbol])	
Volume	=RTD("tos.rtd", "VOLUME",[Symbol])	
OpenInt	=RTD("tos.rtd", "OPEN_INT",[Symbol])	
ImpliedVol	=RTD("tos.rtd", "IMPL_VOL",[Symbol])	
VolIndex	=RTD("tos.rtd", "VOL_INDEX",[Symbol])	
FrontVol	=RTD("tos.rtd", "FRONT_VOL",[Symbol])	
BackVol	=RTD("tos.rtd", "BACK_VOL",[Symbol])	
WeightedBackVol	=RTD("tos.rtd", "WEIGHTED_BACK_VOL",[Symbol])	
VolDiff	=RTD("tos.rtd", "VOL_DIFF",[Symbol])	
PutCallRatio	=RTD("tos.rtd", "PUT_CALL_RATIO",[Symbol])	
CallVolumeIndex	=RTD("tos.rtd", "CALL_VOLUME_INDEX",[Symbol])	
PutVolumeIndex	=RTD("tos.rtd", "PUT_VOLUME_INDEX",[Symbol])	
OptionVolumeIndex	=RTD("tos.rtd", "OPTION_VOLUME_INDEX",[Symbol])	
FrontExpectedMove	=RTD("tos.rtd", "FRONT_EX_MOVE",[Symbol])	
BackExpectedMove	=RTD("tos.rtd", "BACK_EX_MOVE",[Symbol])	
ExpectedMoveDiff	=RTD("tos.rtd", "EX_MOVE_DIFF",[Symbol])	
Beta	=RTD("tos.rtd", "BETA",[Symbol])	
High52	=RTD("tos.rtd", "52HIGH",[Symbol])	
Low52	=RTD("tos.rtd", "52LOW",[Symbol])	
PE	=RTD("tos.rtd", "PE",[Symbol])	
EPS	=RTD("tos.rtd", "EPS",[Symbol])	
MarketCap	=RTD("tos.rtd", "MARKET_CAP",[Symbol])	
Shares	=RTD("tos.rtd", "SHARES",[Symbol])	
DividendYield	=RTD("tos.rtd", "YIELD",[Symbol])	
DividendShare	=RTD("tos.rtd", "DIV",[Symbol])	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.quotes\_tos

The table contains the last data values of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL		PK
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
DESCRIPTION	=RTD("tos.rtd",,"DESCRIPTION",[SYMBOL])	
LAST	=RTD("tos.rtd",,"LAST",[SYMBOL])	
CHANGE	=RTD("tos.rtd",,"NET_CHANGE",[SYMBOL])	
PERCENT_CHANGE	=RTD("tos.rtd",,"PERCENT_CHANGE",[SYMBOL])	
LAST_SIZE	=RTD("tos.rtd",,"LAST_SIZE",[SYMBOL])	
LAST_X	=RTD("tos.rtd",,"LX",[SYMBOL])	
MARK	=RTD("tos.rtd",,"MARK",[SYMBOL])	
MARK_CHANGE	=RTD("tos.rtd",,"MARK_CHANGE",[SYMBOL])	
MARK_PERCENT_CHANGE	=RTD("tos.rtd",,"MARK_PERCENT_CHANGE",[SYMBOL])	
BID	=RTD("tos.rtd",,"BID",[SYMBOL])	
ASK	=RTD("tos.rtd",,"ASK",[SYMBOL])	
BID_SIZE	=RTD("tos.rtd",,"BID_SIZE",[SYMBOL])	
ASK_SIZE	=RTD("tos.rtd",,"ASK_SIZE",[SYMBOL])	
BID_ASK_SIZE	=RTD("tos.rtd",,"BA_SIZE",[SYMBOL])	
BID_X	=RTD("tos.rtd",,"BX",[SYMBOL])	
ASK_X	=RTD("tos.rtd",,"AX",[SYMBOL])	
STRENGTH_METER	=RTD("tos.rtd",,"STRENGTH_METER",[SYMBOL])	
OPEN	=RTD("tos.rtd",,"OPEN",[SYMBOL])	
HIGH	=RTD("tos.rtd",,"HIGH",[SYMBOL])	
LOW	=RTD("tos.rtd",,"LOW",[SYMBOL])	
CLOSE	=RTD("tos.rtd",,"CLOSE",[SYMBOL])	
VOLUME	=RTD("tos.rtd",,"VOLUME",[SYMBOL])	
OPEN_INT	=RTD("tos.rtd",,"OPEN_INT",[SYMBOL])	
IMPLIED_VOL	=RTD("tos.rtd",,"IMPL_VOL",[SYMBOL])	
VOL_INDEX	=RTD("tos.rtd",,"VOL_INDEX",[SYMBOL])	
FRONT_VOL	=RTD("tos.rtd",,"FRONT_VOL",[SYMBOL])	
BACK_VOL	=RTD("tos.rtd",,"BACK_VOL",[SYMBOL])	
WEIGHTED_BACK_VOL	=RTD("tos.rtd",,"WEIGHTED_BACK_VOL",[SYMBOL])	
VOL_DIFF	=RTD("tos.rtd",,"VOL_DIFF",[SYMBOL])	
PUT_CALL_RATIO	=RTD("tos.rtd",,"PUT_CALL_RATIO",[SYMBOL])	
CALL_VOLUME_INDEX	=RTD("tos.rtd",,"CALL_VOLUME_INDEX",[SYMBOL])	
PUT_VOLUME_INDEX	=RTD("tos.rtd",,"PUT_VOLUME_INDEX",[SYMBOL])	
OPTION_VOLUME_INDEX	=RTD("tos.rtd",,"OPTION_VOLUME_INDEX",[SYMBOL])	
FRONT_EXPECTED_MOVE	=RTD("tos.rtd",,"FRONT_EX_MOVE",[SYMBOL])	
BACK_EXPECTED_MOVE	=RTD("tos.rtd",,"BACK_EX_MOVE",[SYMBOL])	
EXPECTED_MOVE_DIFF	=RTD("tos.rtd",,"EX_MOVE_DIFF",[SYMBOL])	
BETA	=RTD("tos.rtd",,"BETA",[SYMBOL])	
HIGH52	=RTD("tos.rtd",,"52HIGH",[SYMBOL])	
LOW52	=RTD("tos.rtd",,"52LOW",[SYMBOL])	
PE	=RTD("tos.rtd",,"PE",[SYMBOL])	
EPS	=RTD("tos.rtd",,"EPS",[SYMBOL])	
MARKET_CAP	=RTD("tos.rtd",,"MARKET_CAP",[SYMBOL])	
SHARES	=RTD("tos.rtd",,"SHARES",[SYMBOL])	
DIVIDEND_YIELD	=RTD("tos.rtd",,"YIELD",[SYMBOL])	
DIVIDEND_SHARE	=RTD("tos.rtd",,"DIV",[SYMBOL])	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_day\_history\_tos

The table contains day data history of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL		PK
DATE	=Date()	PK
TIME	=Time()	
DESCRIPTION	=RTD("tos.rtd",,"DESCRIPTION",[SYMBOL])	
LAST	=RTD("tos.rtd",,"LAST",[SYMBOL])	
CHANGE	=RTD("tos.rtd",,"NET_CHANGE",[SYMBOL])	
PERCENT_CHANGE	=RTD("tos.rtd",,"PERCENT_CHANGE",[SYMBOL])	
LAST_SIZE	=RTD("tos.rtd",,"LAST_SIZE",[SYMBOL])	
LAST_X	=RTD("tos.rtd",,"LX",[SYMBOL])	
MARK	=RTD("tos.rtd",,"MARK",[SYMBOL])	
MARK_CHANGE	=RTD("tos.rtd",,"MARK_CHANGE",[SYMBOL])	
MARK_PERCENT_CHANGE	=RTD("tos.rtd",,"MARK_PERCENT_CHANGE",[SYMBOL])	
BID	=RTD("tos.rtd",,"BID",[SYMBOL])	
ASK	=RTD("tos.rtd",,"ASK",[SYMBOL])	
BID_SIZE	=RTD("tos.rtd",,"BID_SIZE",[SYMBOL])	
ASK_SIZE	=RTD("tos.rtd",,"ASK_SIZE",[SYMBOL])	
BID_ASK_SIZE	=RTD("tos.rtd",,"BA_SIZE",[SYMBOL])	
BID_X	=RTD("tos.rtd",,"BX",[SYMBOL])	
ASK_X	=RTD("tos.rtd",,"AX",[SYMBOL])	
STRENGTH_METER	=RTD("tos.rtd",,"STRENGTH_METER",[SYMBOL])	
OPEN	=RTD("tos.rtd",,"OPEN",[SYMBOL])	
HIGH	=RTD("tos.rtd",,"HIGH",[SYMBOL])	
LOW	=RTD("tos.rtd",,"LOW",[SYMBOL])	
CLOSE	=RTD("tos.rtd",,"CLOSE",[SYMBOL])	
VOLUME	=RTD("tos.rtd",,"VOLUME",[SYMBOL])	
OPEN_INT	=RTD("tos.rtd",,"OPEN_INT",[SYMBOL])	
IMPLIED_VOL	=RTD("tos.rtd",,"IMPL_VOL",[SYMBOL])	
VOL_INDEX	=RTD("tos.rtd",,"VOL_INDEX",[SYMBOL])	
FRONT_VOL	=RTD("tos.rtd",,"FRONT_VOL",[SYMBOL])	
BACK_VOL	=RTD("tos.rtd",,"BACK_VOL",[SYMBOL])	
WEIGHTED_BACK_VOL	=RTD("tos.rtd",,"WEIGHTED_BACK_VOL",[SYMBOL])	
VOL_DIFF	=RTD("tos.rtd",,"VOL_DIFF",[SYMBOL])	
PUT_CALL_RATIO	=RTD("tos.rtd",,"PUT_CALL_RATIO",[SYMBOL])	
CALL_VOLUME_INDEX	=RTD("tos.rtd",,"CALL_VOLUME_INDEX",[SYMBOL])	
PUT_VOLUME_INDEX	=RTD("tos.rtd",,"PUT_VOLUME_INDEX",[SYMBOL])	
OPTION_VOLUME_INDEX	=RTD("tos.rtd",,"OPTION_VOLUME_INDEX",[SYMBOL])	
FRONT_EXPECTED_MOVE	=RTD("tos.rtd",,"FRONT_EX_MOVE",[SYMBOL])	
BACK_EXPECTED_MOVE	=RTD("tos.rtd",,"BACK_EX_MOVE",[SYMBOL])	
EXPECTED_MOVE_DIFF	=RTD("tos.rtd",,"EX_MOVE_DIFF",[SYMBOL])	
BETA	=RTD("tos.rtd",,"BETA",[SYMBOL])	
HIGH52	=RTD("tos.rtd",,"52HIGH",[SYMBOL])	
LOW52	=RTD("tos.rtd",,"52LOW",[SYMBOL])	
PE	=RTD("tos.rtd",,"PE",[SYMBOL])	
EPS	=RTD("tos.rtd",,"EPS",[SYMBOL])	
MARKET_CAP	=RTD("tos.rtd",,"MARKET_CAP",[SYMBOL])	
SHARES	=RTD("tos.rtd",,"SHARES",[SYMBOL])	
DIVIDEND_YIELD	=RTD("tos.rtd",,"YIELD",[SYMBOL])	
DIVIDEND_SHARE	=RTD("tos.rtd",,"DIV",[SYMBOL])	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_tick\_history\_tos

The table contains tick data history of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
SYMBOL		
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
DESCRIPTION	=RTD("tos.rtd", "DESCRIPTION", [SYMBOL])	
LAST	=RTD("tos.rtd", "LAST", [SYMBOL])	
CHANGE	=RTD("tos.rtd", "NET_CHANGE", [SYMBOL])	
PERCENT_CHANGE	=RTD("tos.rtd", "PERCENT_CHANGE", [SYMBOL])	
LAST_SIZE	=RTD("tos.rtd", "LAST_SIZE", [SYMBOL])	
LAST_X	=RTD("tos.rtd", "LX", [SYMBOL])	
MARK	=RTD("tos.rtd", "MARK", [SYMBOL])	
MARK_CHANGE	=RTD("tos.rtd", "MARK_CHANGE", [SYMBOL])	
MARK_PERCENT_CHANGE	=RTD("tos.rtd", "MARK_PERCENT_CHANGE", [SYMBOL])	
BID	=RTD("tos.rtd", "BID", [SYMBOL])	
ASK	=RTD("tos.rtd", "ASK", [SYMBOL])	
BID_SIZE	=RTD("tos.rtd", "BID_SIZE", [SYMBOL])	
ASK_SIZE	=RTD("tos.rtd", "ASK_SIZE", [SYMBOL])	
BID_ASK_SIZE	=RTD("tos.rtd", "BA_SIZE", [SYMBOL])	
BID_X	=RTD("tos.rtd", "BX", [SYMBOL])	
ASK_X	=RTD("tos.rtd", "AX", [SYMBOL])	
STRENGTH_METER	=RTD("tos.rtd", "STRENGTH_METER", [SYMBOL])	
OPEN	=RTD("tos.rtd", "OPEN", [SYMBOL])	
HIGH	=RTD("tos.rtd", "HIGH", [SYMBOL])	
LOW	=RTD("tos.rtd", "LOW", [SYMBOL])	
CLOSE	=RTD("tos.rtd", "CLOSE", [SYMBOL])	
VOLUME	=RTD("tos.rtd", "VOLUME", [SYMBOL])	
OPEN_INT	=RTD("tos.rtd", "OPEN_INT", [SYMBOL])	
IMPLIED_VOL	=RTD("tos.rtd", "IMPL_VOL", [SYMBOL])	
VOL_INDEX	=RTD("tos.rtd", "VOL_INDEX", [SYMBOL])	
FRONT_VOL	=RTD("tos.rtd", "FRONT_VOL", [SYMBOL])	
BACK_VOL	=RTD("tos.rtd", "BACK_VOL", [SYMBOL])	
WEIGHTED_BACK_VOL	=RTD("tos.rtd", "WEIGHTED_BACK_VOL", [SYMBOL])	
VOL_DIFF	=RTD("tos.rtd", "VOL_DIFF", [SYMBOL])	
PUT_CALL_RATIO	=RTD("tos.rtd", "PUT_CALL_RATIO", [SYMBOL])	
CALL_VOLUME_INDEX	=RTD("tos.rtd", "CALL_VOLUME_INDEX", [SYMBOL])	
PUT_VOLUME_INDEX	=RTD("tos.rtd", "PUT_VOLUME_INDEX", [SYMBOL])	
OPTION_VOLUME_INDEX	=RTD("tos.rtd", "OPTION_VOLUME_INDEX", [SYMBOL])	
FRONT_EXPECTED_MOVE	=RTD("tos.rtd", "FRONT_EX_MOVE", [SYMBOL])	
BACK_EXPECTED_MOVE	=RTD("tos.rtd", "BACK_EX_MOVE", [SYMBOL])	
EXPECTED_MOVE_DIFF	=RTD("tos.rtd", "EX_MOVE_DIFF", [SYMBOL])	
BETA	=RTD("tos.rtd", "BETA", [SYMBOL])	
HIGH52	=RTD("tos.rtd", "52HIGH", [SYMBOL])	
LOW52	=RTD("tos.rtd", "52LOW", [SYMBOL])	
PE	=RTD("tos.rtd", "PE", [SYMBOL])	
EPS	=RTD("tos.rtd", "EPS", [SYMBOL])	
MARKET_CAP	=RTD("tos.rtd", "MARKET_CAP", [SYMBOL])	
SHARES	=RTD("tos.rtd", "SHARES", [SYMBOL])	
DIVIDEND_YIELD	=RTD("tos.rtd", "YIELD", [SYMBOL])	
DIVIDEND_SHARE	=RTD("tos.rtd", "DIV", [SYMBOL])	

# Quotes from Thinkorswim thinkDesktop via DDE

## Overview

The RTD database contains preconfigured tables for getting real-time data from [Thinkorswim thinkDesktop](#).

Quote tables are designed for getting data for stocks, futures, and currency pairs. Use option tables for options.

Since RealTimeToDB 2.5, the default formulas use the tos.rtd server, not DDE.

You may change RTD formulas to DDE using the patches from the database folders.

The data are updated from the thinkDesktop DDE server that requires administrator privileges for running RealTimeToDB.

You may disable unusable columns to reduce the server overhead.

The DDE server does not contain an actual data time field.

The DateTime, Date, and Time fields are updated using the PC time adjusted to the table time zone (Eastern Standard Time).

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	QuoteListTOS		
rtd	QuotesTOS	SELECT Code AS Symbol FROM rtd.QuoteListTOS	
rtd	QuoteDayHistoryTOS	SELECT Code AS Symbol FROM rtd.QuoteListTOS	
rtd	QuoteTickHistoryTOS	SELECT Code AS Symbol FROM rtd.QuoteListTOS	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	quote_list_tos		
rtd	quotes_tos	SELECT CODE AS SYMBOL FROM rtd.quote_list_tos	
rtd	quote_day_history_tos	SELECT CODE AS SYMBOL FROM rtd.quote_list_tos	
rtd	quote_tick_history_tos	SELECT CODE AS SYMBOL FROM rtd.quote_list_tos	1

Oracle Database, IBM DB2, and NuoDB:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	QUOTE_LIST_TOS		
RTD	QUOTES_TOS	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_TOS	
RTD	QUOTE_DAY_HISTORY_TOS	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_TOS	
RTD	QUOTE_TICK_HISTORY_TOS	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_TOS	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.QuoteListTOS for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
AAPL
GOOG

rtd.quote\_list\_tos for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL:

CODE
AAPL
GOOG

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	QuotesTOS	Symbol		PK
rtd	QuoteDayHistoryTOS	Symbol		PK
rtd	QuoteDayHistoryTOS	Date	=Date()	PK
rtd	QuoteTickHistoryTOS	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	quotes_tos	SYMBOL		PK
rtd	quote_day_history_tos	SYMBOL		PK
rtd	quote_day_history_tos	DATE	=Date()	PK
rtd	quote_tick_history_tos	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	QUOTES_TOS	SYMBOL		PK
RTD	QUOTE_DAY_HISTORY_TOS	SYMBOL		PK
RTD	QUOTE_DAY_HISTORY_TOS	DATE	=Date()	PK
RTD	QUOTE_TICK_HISTORY_TOS	ID		PK, IDENTITY

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.QuotesTOS

The table contains the last data values of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol		PK
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Description	=TOS DESCRIPTION![Symbol]	
Last	=TOS LAST![Symbol]	
Change	=TOS NET_CHANGE![Symbol]	
PercentChange	=TOS PERCENT_CHANGE![Symbol]	
LastSize	=TOS LAST_SIZE![Symbol]	
LastX	=TOS LX![Symbol]	
Mark	=TOS MARK![Symbol]	
MarkChange	=TOS MARK_CHANGE![Symbol]	
MarkPercentChange	=TOS MARK_PERCENT_CHANGE![Symbol]	
Bid	=TOS BID![Symbol]	
Ask	=TOS ASK![Symbol]	
BidSize	=TOS BID_SIZE![Symbol]	
AskSize	=TOS ASK_SIZE![Symbol]	
BidAskSize	=TOS BA_SIZE![Symbol]	
BidX	=TOS BX![Symbol]	
AskX	=TOS AX![Symbol]	
StrengthMeter	=TOS STRENGTH_METER![Symbol]	
Open	=TOS OPEN![Symbol]	
High	=TOS HIGH![Symbol]	
Low	=TOS LOW![Symbol]	
Close	=TOS CLOSE![Symbol]	
Volume	=TOS VOLUME![Symbol]	
OpenInt	=TOS OPEN_INT![Symbol]	
ImpliedVol	=TOS IMPL_VOL![Symbol]	
VolIndex	=TOS VOL_INDEX![Symbol]	
FrontVol	=TOS FRONT_VOL![Symbol]	
BackVol	=TOS BACK_VOL![Symbol]	
WeightedBackVol	=TOS WEIGHTED_BACK_VOL![Symbol]	
VolDiff	=TOS VOL_DIFF![Symbol]	
PutCallRatio	=TOS PUT_CALL_RATIO![Symbol]	
CallVolumeIndex	=TOS CALL_VOLUME_INDEX![Symbol]	
PutVolumeIndex	=TOS PUT_VOLUME_INDEX![Symbol]	
OptionVolumeIndex	=TOS OPTION_VOLUME_INDEX![Symbol]	
FrontExpectedMove	=TOS FRONT_EX_MOVE![Symbol]	
BackExpectedMove	=TOS BACK_EX_MOVE![Symbol]	
ExpectedMoveDiff	=TOS EX_MOVE_DIFF![Symbol]	
Beta	=TOS BETA![Symbol]	
High52	=TOS '52HIGH'![Symbol]	
Low52	=TOS '52LOW'![Symbol]	
PE	=TOS PE![Symbol]	
EPS	=TOS EPS![Symbol]	
MarketCap	=TOS MARKET_CAP![Symbol]	
Shares	=TOS SHARES![Symbol]	
DividendYield	=TOS YIELD![Symbol]	
DividendShare	=TOS DIV![Symbol]	
LastUpdateTimeStamp		



## rtd.QuoteDayHistoryTOS

The table contains day data history of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol		PK
Date	=Date()	PK
Time	=Time()	
Description	=TOS DESCRIPTION![Symbol]	
Last	=TOS LAST![Symbol]	
Change	=TOS NET_CHANGE![Symbol]	
PercentChange	=TOS PERCENT_CHANGE![Symbol]	
LastSize	=TOS LAST_SIZE![Symbol]	
LastX	=TOS LX![Symbol]	
Mark	=TOS MARK![Symbol]	
MarkChange	=TOS MARK_CHANGE![Symbol]	
MarkPercentChange	=TOS MARK_PERCENT_CHANGE![Symbol]	
Bid	=TOS BID![Symbol]	
Ask	=TOS ASK![Symbol]	
BidSize	=TOS BID_SIZE![Symbol]	
AskSize	=TOS ASK_SIZE![Symbol]	
BidAskSize	=TOS BA_SIZE![Symbol]	
BidX	=TOS BX![Symbol]	
AskX	=TOS AX![Symbol]	
StrengthMeter	=TOS STRENGTH_METER![Symbol]	
Open	=TOS OPEN![Symbol]	
High	=TOS HIGH![Symbol]	
Low	=TOS LOW![Symbol]	
Close	=TOS CLOSE![Symbol]	
Volume	=TOS VOLUME![Symbol]	
OpenInt	=TOS OPEN_INT![Symbol]	
ImpliedVol	=TOS IMPL_VOL![Symbol]	
VolIndex	=TOS VOL_INDEX![Symbol]	
FrontVol	=TOS FRONT_VOL![Symbol]	
BackVol	=TOS BACK_VOL![Symbol]	
WeightedBackVol	=TOS WEIGHTED_BACK_VOL![Symbol]	
VolDiff	=TOS VOL_DIFF![Symbol]	
PutCallRatio	=TOS PUT_CALL_RATIO![Symbol]	
CallVolumeIndex	=TOS CALL_VOLUME_INDEX![Symbol]	
PutVolumeIndex	=TOS PUT_VOLUME_INDEX![Symbol]	
OptionVolumeIndex	=TOS OPTION_VOLUME_INDEX![Symbol]	
FrontExpectedMove	=TOS FRONT_EX_MOVE![Symbol]	
BackExpectedMove	=TOS BACK_EX_MOVE![Symbol]	
ExpectedMoveDiff	=TOS EX_MOVE_DIFF![Symbol]	
Beta	=TOS BETA![Symbol]	
High52	=TOS '52HIGH'![Symbol]	
Low52	=TOS '52LOW'![Symbol]	
PE	=TOS PE![Symbol]	
EPS	=TOS EPS![Symbol]	
MarketCap	=TOS MARKET_CAP![Symbol]	
Shares	=TOS SHARES![Symbol]	
DividendYield	=TOS YIELD![Symbol]	
DividendShare	=TOS DIV![Symbol]	
LastUpdateTimeStamp		

## rtd.QuoteTickHistoryTOS

The table contains tick data history of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Symbol		
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Description	=TOS DESCRIPTION![Symbol]	
Last	=TOS LAST![Symbol]	
Change	=TOS NET_CHANGE![Symbol]	
PercentChange	=TOS PERCENT_CHANGE![Symbol]	
LastSize	=TOS LAST_SIZE![Symbol]	
LastX	=TOS LX![Symbol]	
Mark	=TOS MARK![Symbol]	
MarkChange	=TOS MARK_CHANGE![Symbol]	
MarkPercentChange	=TOS MARK_PERCENT_CHANGE![Symbol]	
Bid	=TOS BID![Symbol]	
Ask	=TOS ASK![Symbol]	
BidSize	=TOS BID_SIZE![Symbol]	
AskSize	=TOS ASK_SIZE![Symbol]	
BidAskSize	=TOS BA_SIZE![Symbol]	
BidX	=TOS BX![Symbol]	
AskX	=TOS AX![Symbol]	
StrengthMeter	=TOS STRENGTH_METER![Symbol]	
Open	=TOS OPEN![Symbol]	
High	=TOS HIGH![Symbol]	
Low	=TOS LOW![Symbol]	
Close	=TOS CLOSE![Symbol]	
Volume	=TOS VOLUME![Symbol]	
OpenInt	=TOS OPEN_INT![Symbol]	
ImpliedVol	=TOS IMPL_VOL![Symbol]	
VolIndex	=TOS VOL_INDEX![Symbol]	
FrontVol	=TOS FRONT_VOL![Symbol]	
BackVol	=TOS BACK_VOL![Symbol]	
WeightedBackVol	=TOS WEIGHTED_BACK_VOL![Symbol]	
VolDiff	=TOS VOL_DIFF![Symbol]	
PutCallRatio	=TOS PUT_CALL_RATIO![Symbol]	
CallVolumeIndex	=TOS CALL_VOLUME_INDEX![Symbol]	
PutVolumeIndex	=TOS PUT_VOLUME_INDEX![Symbol]	
OptionVolumeIndex	=TOS OPTION_VOLUME_INDEX![Symbol]	
FrontExpectedMove	=TOS FRONT_EX_MOVE![Symbol]	
BackExpectedMove	=TOS BACK_EX_MOVE![Symbol]	
ExpectedMoveDiff	=TOS EX_MOVE_DIFF![Symbol]	
Beta	=TOS BETA![Symbol]	
High52	=TOS '52HIGH'![Symbol]	
Low52	=TOS '52LOW'![Symbol]	
PE	=TOS PE![Symbol]	
EPS	=TOS EPS![Symbol]	
MarketCap	=TOS MARKET_CAP![Symbol]	
Shares	=TOS SHARES![Symbol]	
DividendYield	=TOS YIELD![Symbol]	
DividendShare	=TOS DIV![Symbol]	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.quotes\_tos

The table contains the last data values of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL		PK
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
DESCRIPTION	=TOS DESCRIPTION! SYMBOL]	
LAST	=TOS LAST! SYMBOL]	
CHANGE	=TOS NET_CHANGE! SYMBOL]	
PERCENT_CHANGE	=TOS PERCENT_CHANGE! SYMBOL]	
LAST_SIZE	=TOS LAST_SIZE! SYMBOL]	
LAST_X	=TOS LX! SYMBOL]	
MARK	=TOS MARK! SYMBOL]	
MARK_CHANGE	=TOS MARK_CHANGE! SYMBOL]	
MARK_PERCENT_CHANGE	=TOS MARK_PERCENT_CHANGE! SYMBOL]	
BID	=TOS BID! SYMBOL]	
ASK	=TOS ASK! SYMBOL]	
BID_SIZE	=TOS BID_SIZE! SYMBOL]	
ASK_SIZE	=TOS ASK_SIZE! SYMBOL]	
BID_ASK_SIZE	=TOS BA_SIZE! SYMBOL]	
BID_X	=TOS BX! SYMBOL]	
ASK_X	=TOS AX! SYMBOL]	
STRENGTH_METER	=TOS STRENGTH_METER! SYMBOL]	
OPEN	=TOS OPEN! SYMBOL]	
HIGH	=TOS HIGH! SYMBOL]	
LOW	=TOS LOW! SYMBOL]	
CLOSE	=TOS CLOSE! SYMBOL]	
VOLUME	=TOS VOLUME! SYMBOL]	
OPEN_INT	=TOS OPEN_INT! SYMBOL]	
IMPLIED_VOL	=TOS IMPL_VOL! SYMBOL]	
VOL_INDEX	=TOS VOL_INDEX! SYMBOL]	
FRONT_VOL	=TOS FRONT_VOL! SYMBOL]	
BACK_VOL	=TOS BACK_VOL! SYMBOL]	
WEIGHTED_BACK_VOL	=TOS WEIGHTED_BACK_VOL! SYMBOL]	
VOL_DIFF	=TOS VOL_DIFF! SYMBOL]	
PUT_CALL_RATIO	=TOS PUT_CALL_RATIO! SYMBOL]	
CALL_VOLUME_INDEX	=TOS CALL_VOLUME_INDEX! SYMBOL]	
PUT_VOLUME_INDEX	=TOS PUT_VOLUME_INDEX! SYMBOL]	
OPTION_VOLUME_INDEX	=TOS OPTION_VOLUME_INDEX! SYMBOL]	
FRONT_EXPECTED_MOVE	=TOS FRONT_EX_MOVE! SYMBOL]	
BACK_EXPECTED_MOVE	=TOS BACK_EX_MOVE! SYMBOL]	
EXPECTED_MOVE_DIFF	=TOS EX_MOVE_DIFF! SYMBOL]	
BETA	=TOS BETA! SYMBOL]	
HIGH52	=TOS '52HIGH'! SYMBOL]	
LOW52	=TOS '52LOW'! SYMBOL]	
PE	=TOS PE! SYMBOL]	
EPS	=TOS EPS! SYMBOL]	
MARKET_CAP	=TOS MARKET_CAP! SYMBOL]	
SHARES	=TOS SHARES! SYMBOL]	
DIVIDEND_YIELD	=TOS YIELD! SYMBOL]	
DIVIDEND_SHARE	=TOS DIV! SYMBOL]	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_day\_history\_tos

The table contains day data history of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL		PK
DATE	=Date()	PK
TIME	=Time()	
DESCRIPTION	=TOS DESCRIPTION! SYMBOL]	
LAST	=TOS LAST! SYMBOL]	
CHANGE	=TOS NET_CHANGE! SYMBOL]	
PERCENT_CHANGE	=TOS PERCENT_CHANGE! SYMBOL]	
LAST_SIZE	=TOS LAST_SIZE! SYMBOL]	
LAST_X	=TOS LX! SYMBOL]	
MARK	=TOS MARK! SYMBOL]	
MARK_CHANGE	=TOS MARK_CHANGE! SYMBOL]	
MARK_PERCENT_CHANGE	=TOS MARK_PERCENT_CHANGE! SYMBOL]	
BID	=TOS BID! SYMBOL]	
ASK	=TOS ASK! SYMBOL]	
BID_SIZE	=TOS BID_SIZE! SYMBOL]	
ASK_SIZE	=TOS ASK_SIZE! SYMBOL]	
BID_ASK_SIZE	=TOS BA_SIZE! SYMBOL]	
BID_X	=TOS BX! SYMBOL]	
ASK_X	=TOS AX! SYMBOL]	
STRENGTH_METER	=TOS STRENGTH_METER! SYMBOL]	
OPEN	=TOS OPEN! SYMBOL]	
HIGH	=TOS HIGH! SYMBOL]	
LOW	=TOS LOW! SYMBOL]	
CLOSE	=TOS CLOSE! SYMBOL]	
VOLUME	=TOS VOLUME! SYMBOL]	
OPEN_INT	=TOS OPEN_INT! SYMBOL]	
IMPLIED_VOL	=TOS IMPL_VOL! SYMBOL]	
VOL_INDEX	=TOS VOL_INDEX! SYMBOL]	
FRONT_VOL	=TOS FRONT_VOL! SYMBOL]	
BACK_VOL	=TOS BACK_VOL! SYMBOL]	
WEIGHTED_BACK_VOL	=TOS WEIGHTED_BACK_VOL! SYMBOL]	
VOL_DIFF	=TOS VOL_DIFF! SYMBOL]	
PUT_CALL_RATIO	=TOS PUT_CALL_RATIO! SYMBOL]	
CALL_VOLUME_INDEX	=TOS CALL_VOLUME_INDEX! SYMBOL]	
PUT_VOLUME_INDEX	=TOS PUT_VOLUME_INDEX! SYMBOL]	
OPTION_VOLUME_INDEX	=TOS OPTION_VOLUME_INDEX! SYMBOL]	
FRONT_EXPECTED_MOVE	=TOS FRONT_EX_MOVE! SYMBOL]	
BACK_EXPECTED_MOVE	=TOS BACK_EX_MOVE! SYMBOL]	
EXPECTED_MOVE_DIFF	=TOS EX_MOVE_DIFF! SYMBOL]	
BETA	=TOS BETA! SYMBOL]	
HIGH52	=TOS '52HIGH'! SYMBOL]	
LOW52	=TOS '52LOW'! SYMBOL]	
PE	=TOS PE! SYMBOL]	
EPS	=TOS EPS! SYMBOL]	
MARKET_CAP	=TOS MARKET_CAP! SYMBOL]	
SHARES	=TOS SHARES! SYMBOL]	
DIVIDEND_YIELD	=TOS YIELD! SYMBOL]	
DIVIDEND_SHARE	=TOS DIV! SYMBOL]	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_tick\_history\_tos

The table contains tick data history of stocks, futures, and currency pairs from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
SYMBOL		
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
DESCRIPTION	=TOS DESCRIPTION![SYMBOL]	
LAST	=TOS LAST![SYMBOL]	
CHANGE	=TOS NET_CHANGE![SYMBOL]	
PERCENT_CHANGE	=TOS PERCENT_CHANGE![SYMBOL]	
LAST_SIZE	=TOS LAST_SIZE![SYMBOL]	
LAST_X	=TOS LX![SYMBOL]	
MARK	=TOS MARK![SYMBOL]	
MARK_CHANGE	=TOS MARK_CHANGE![SYMBOL]	
MARK_PERCENT_CHANGE	=TOS MARK_PERCENT_CHANGE![SYMBOL]	
BID	=TOS BID![SYMBOL]	
ASK	=TOS ASK![SYMBOL]	
BID_SIZE	=TOS BID_SIZE![SYMBOL]	
ASK_SIZE	=TOS ASK_SIZE![SYMBOL]	
BID_ASK_SIZE	=TOS BA_SIZE![SYMBOL]	
BID_X	=TOS BX![SYMBOL]	
ASK_X	=TOS AX![SYMBOL]	
STRENGTH_METER	=TOS STRENGTH_METER![SYMBOL]	
OPEN	=TOS OPEN![SYMBOL]	
HIGH	=TOS HIGH![SYMBOL]	
LOW	=TOS LOW![SYMBOL]	
CLOSE	=TOS CLOSE![SYMBOL]	
VOLUME	=TOS VOLUME![SYMBOL]	
OPEN_INT	=TOS OPEN_INT![SYMBOL]	
IMPLIED_VOL	=TOS IMPL_VOL![SYMBOL]	
VOL_INDEX	=TOS VOL_INDEX![SYMBOL]	
FRONT_VOL	=TOS FRONT_VOL![SYMBOL]	
BACK_VOL	=TOS BACK_VOL![SYMBOL]	
WEIGHTED_BACK_VOL	=TOS WEIGHTED_BACK_VOL![SYMBOL]	
VOL_DIFF	=TOS VOL_DIFF![SYMBOL]	
PUT_CALL_RATIO	=TOS PUT_CALL_RATIO![SYMBOL]	
CALL_VOLUME_INDEX	=TOS CALL_VOLUME_INDEX![SYMBOL]	
PUT_VOLUME_INDEX	=TOS PUT_VOLUME_INDEX![SYMBOL]	
OPTION_VOLUME_INDEX	=TOS OPTION_VOLUME_INDEX![SYMBOL]	
FRONT_EXPECTED_MOVE	=TOS FRONT_EX_MOVE![SYMBOL]	
BACK_EXPECTED_MOVE	=TOS BACK_EX_MOVE![SYMBOL]	
EXPECTED_MOVE_DIFF	=TOS EX_MOVE_DIFF![SYMBOL]	
BETA	=TOS BETA![SYMBOL]	
HIGH52	=TOS '52HIGH'![SYMBOL]	
LOW52	=TOS '52LOW'![SYMBOL]	
PE	=TOS PE![SYMBOL]	
EPS	=TOS EPS![SYMBOL]	
MARKET_CAP	=TOS MARKET_CAP![SYMBOL]	
SHARES	=TOS SHARES![SYMBOL]	
DIVIDEND_YIELD	=TOS YIELD![SYMBOL]	
DIVIDEND_SHARE	=TOS DIVI![SYMBOL]	

# Quotes from InteractiveBrokers Trader Workstation (TWS)

## Overview

The RTD database contains preconfigured tables for getting real-time data from [InteractiveBrokers Trader Workstation \(TWS\)](#).

Quote tables are designed for getting data for stocks, futures, and currency pairs. Use option tables for options.

The data are updated from the DDE server.

You may disable unusable columns to reduce the server overhead.

The DDE server does not contain an actual data time field.

The DateTime, Date, and Time fields are updated using the PC time adjusted to the table time zone (Eastern Standard Time).

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	QuoteListTWS		
rtd	QuotesTWS	SELECT TickId, Code AS Symbol FROM rtd.QuoteListTWS WHERE Code NOT LIKE '%_OPT_20%'	
rtd	QuoteDayHistoryTWS	SELECT TickId, Code AS Symbol FROM rtd.QuoteListTWS WHERE Code NOT LIKE '%_OPT_20%'	
rtd	QuoteTickHistoryTWS	SELECT TickId, Code AS Symbol FROM rtd.QuoteListTWS WHERE Code NOT LIKE '%_OPT_20%'	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	quote_list_tws		
rtd	quotes_tws	SELECT TICK_ID, CODE AS SYMBOL FROM rtd.quote_list_tws WHERE CODE NOT LIKE '%_OPT_20%'	
rtd	quote_day_history_tws	SELECT TICK_ID, CODE AS SYMBOL FROM rtd.quote_list_tws WHERE CODE NOT LIKE '%_OPT_20%'	
rtd	quote_tick_history_tws	SELECT TICK_ID, CODE AS SYMBOL FROM rtd.quote_list_tws WHERE CODE NOT LIKE '%_OPT_20%'	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	QUOTE_LIST_TWS		
RTD	QUOTES_TWS	SELECT TICK_ID, CODE AS SYMBOL FROM RTD.QUOTE_LIST_TWS WHERE CODE NOT LIKE '%_OPT_20%'	
RTD	QUOTE_DAY_HISTORY_TWS	SELECT TICK_ID, CODE AS SYMBOL FROM RTD.QUOTE_LIST_TWS WHERE CODE NOT LIKE '%_OPT_20%'	
RTD	QUOTE_TICK_HISTORY_TWS	SELECT TICK_ID, CODE AS SYMBOL FROM RTD.QUOTE_LIST_TWS WHERE CODE NOT LIKE '%_OPT_20%'	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.QuoteListTWS for Microsoft SQL Server and Microsoft SQL Server Compact:

TickId	Code
1	AAPL
2	GOOG
8	AAPL_OPT_20150116_500_C_100_SMART_USD_~
9	AAPL_OPT_20150116_600_C_100_SMART_USD_~

rtd.quote\_list\_tws for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

TICK_ID	CODE
1	AAPL
2	GOOG
8	AAPL_OPT_20150116_500_C_100_SMART_USD_~
9	AAPL_OPT_20150116_600_C_100_SMART_USD_~

The task table contains tickers for quote and option tables as the TWS DDE server requires ticker registration using the TickId field. Accordingly, quote table tasks select not option tickers only.

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	QuotesTWS	Req	=S tik!'id[TickId]?req?[Symbol]_STK_SMART_USD_~'	Formula
rtd	QuotesTWS	TickId		Formula
rtd	QuotesTWS	Symbol		PK
rtd	QuoteDayHistoryTWS	ID		Formula
rtd	QuoteDayHistoryTWS	Req	=S tik!'id[TickId]?req?[Symbol]_STK_SMART_USD_~'	Formula
rtd	QuoteDayHistoryTWS	TickId		Formula
rtd	QuoteDayHistoryTWS	Symbol		PK
rtd	QuoteDayHistoryTWS	Date	=Date()	PK
rtd	QuoteTickHistoryTWS	Req	=S tik!'id[TickId]?req?[Symbol]_STK_SMART_USD_~'	Formula
rtd	QuoteTickHistoryTWS	TickId		Formula
rtd	QuoteTickHistoryTWS	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	quotes_tws	REQ	=S tik!'id[TICK_ID]?req?[SYMBOL]_STK_SMART_USD_~'	Formula
rtd	quotes_tws	TICK_ID		Formula
rtd	quotes_tws	SYMBOL		PK
rtd	quote_day_history_tws	ID		Formula
rtd	quote_day_history_tws	REQ	=S tik!'id[TICK_ID]?req?[SYMBOL]_STK_SMART_USD_~'	Formula
rtd	quote_day_history_tws	TICK_ID		Formula
rtd	quote_day_history_tws	SYMBOL		PK
rtd	quote_day_history_tws	DATE	=Date()	PK
rtd	quote_tick_history_tws	REQ	=S tik!'id[TICK_ID]?req?[SYMBOL]_STK_SMART_USD_~'	Formula
rtd	quote_tick_history_tws	TICK_ID		Formula
rtd	quote_tick_history_tws	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	QUOTES_TWS	REQ	=S tik!'id[TICK_ID]?req?[SYMBOL]_STK_SMART_USD_~'	Formula
RTD	QUOTES_TWS	TICK_ID		Formula
RTD	QUOTES_TWS	SYMBOL		PK
RTD	QUOTE_DAY_HISTORY_TWS	ID		Formula
RTD	QUOTE_DAY_HISTORY_TWS	REQ	=S tik!'id[TICK_ID]?req?[SYMBOL]_STK_SMART_USD_~'	Formula
RTD	QUOTE_DAY_HISTORY_TWS	TICK_ID		Formula
RTD	QUOTE_DAY_HISTORY_TWS	SYMBOL		PK
RTD	QUOTE_DAY_HISTORY_TWS	DATE	=Date()	PK
RTD	QUOTE_TICK_HISTORY_TWS	REQ	=S tik!'id[TICK_ID]?req?[SYMBOL]_STK_SMART_USD_~'	Formula
RTD	QUOTE_TICK_HISTORY_TWS	TICK_ID		Formula
RTD	QUOTE_TICK_HISTORY_TWS	ID		PK, IDENTITY

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.QuotesTWS

The table contains the last data values of stocks, futures, and currency pairs from InteractiveBrokers Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
Req	=S tik!'id[TickId]?req?[Symbol]_STK_SMART_USD_~'	Formula
TickId		Formula
Symbol		PK
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Last	=S tik!'id[TickId]?last	
LastSize	=S tik!'id[TickId]?lastSize	
Bid	=S tik!'id[TickId]?bid	

Ask	=S tiklid[TickId]?ask	
BidSize	=S tiklid[TickId]?bidSize	
AskSize	=S tiklid[TickId]?askSize	
High	=S tiklid[TickId]?high	
Low	=S tiklid[TickId]?low	
Close	=S tiklid[TickId]?close	
Volume	=S tiklid[TickId]?volume	
LastUpdateTimeStamp		

## rtd.QuoteDayHistoryTWS

The table contains day data history of stocks, futures, and currency pairs from InteractiveBrokers Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		Formula
Req	=S tik!id[TickId]?req?[Symbol]_STK_SMART_USD_~'	Formula
TickId		Formula
Symbol		PK
Date	=Date()	PK
Time	=Time()	
Last	=S tiklid[TickId]?last	
LastSize	=S tiklid[TickId]?lastSize	
Bid	=S tiklid[TickId]?bid	
Ask	=S tiklid[TickId]?ask	
BidSize	=S tiklid[TickId]?bidSize	
AskSize	=S tiklid[TickId]?askSize	
High	=S tiklid[TickId]?high	
Low	=S tiklid[TickId]?low	
Close	=S tiklid[TickId]?close	
Volume	=S tiklid[TickId]?volume	
LastUpdateTimeStamp		

## rtd.QuoteTickHistoryTWS

The table contains tick data history of stocks, futures, and currency pairs from InteractiveBrokers Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
Req	=S tik!id[TickId]?req?[Symbol]_STK_SMART_USD_~'	Formula
TickId		Formula
ID		PK, IDENTITY
Symbol		
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Last	=S tiklid[TickId]?last	
LastSize	=S tiklid[TickId]?lastSize	
Bid	=S tiklid[TickId]?bid	
Ask	=S tiklid[TickId]?ask	
BidSize	=S tiklid[TickId]?bidSize	
AskSize	=S tiklid[TickId]?askSize	
High	=S tiklid[TickId]?high	
Low	=S tiklid[TickId]?low	
Close	=S tiklid[TickId]?close	
Volume	=S tiklid[TickId]?volume	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.quotes\_tws

The table contains the last data values of stocks, futures, and currency pairs from InteractiveBroker Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
REQ	=S tik!id[TICK_ID]?req?[SYMBOL]_STK_SMART_USD_~'	Formula
TICK_ID		Formula
SYMBOL		PK
DATETIME	=DateTime()	



DATE	=Date()	
TIME	=Time()	
LAST	=S tiklid[TICK_ID]?last	
LAST_SIZE	=S tiklid[TICK_ID]?lastSize	
BID	=S tiklid[TICK_ID]?bid	
ASK	=S tiklid[TICK_ID]?ask	
BID_SIZE	=S tiklid[TICK_ID]?bidSize	
ASK_SIZE	=S tiklid[TICK_ID]?askSize	
HIGH	=S tiklid[TICK_ID]?high	
LOW	=S tiklid[TICK_ID]?low	
CLOSE	=S tiklid[TICK_ID]?close	
VOLUME	=S tiklid[TICK_ID]?volume	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_day\_history\_tws

The table contains day data history of stocks, futures, and currency pairs from InteractiveBroker TraderWorkStation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		Formula
REQ	=S tiklid[TICK_ID]?req?[SYMBOL]_STK_SMART_USD_~'	Formula
TICK_ID		Formula
SYMBOL		PK
DATE	=Date()	PK
TIME	=Time()	
LAST	=S tiklid[TICK_ID]?last	
LAST_SIZE	=S tiklid[TICK_ID]?lastSize	
BID	=S tiklid[TICK_ID]?bid	
ASK	=S tiklid[TICK_ID]?ask	
BID_SIZE	=S tiklid[TICK_ID]?bidSize	
ASK_SIZE	=S tiklid[TICK_ID]?askSize	
HIGH	=S tiklid[TICK_ID]?high	
LOW	=S tiklid[TICK_ID]?low	
CLOSE	=S tiklid[TICK_ID]?close	
VOLUME	=S tiklid[TICK_ID]?volume	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_tick\_history\_tws

The table contains tick data history of stocks, futures, and currency pairs from InteractiveBroker TraderWorkStation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
REQ	=S tiklid[TICK_ID]?req?[SYMBOL]_STK_SMART_USD_~'	Formula
TICK_ID		Formula
ID		PK, IDENTITY
SYMBOL		
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
LAST	=S tiklid[TICK_ID]?last	
LAST_SIZE	=S tiklid[TICK_ID]?lastSize	
BID	=S tiklid[TICK_ID]?bid	
ASK	=S tiklid[TICK_ID]?ask	
BID_SIZE	=S tiklid[TICK_ID]?bidSize	
ASK_SIZE	=S tiklid[TICK_ID]?askSize	
HIGH	=S tiklid[TICK_ID]?high	
LOW	=S tiklid[TICK_ID]?low	
CLOSE	=S tiklid[TICK_ID]?close	
VOLUME	=S tiklid[TICK_ID]?volume	

# Quotes from Hybrid Solutions VertexFX Trader (VFX)

## Overview

The RTD database contains preconfigured tables for getting real-time data from [VertexFX Trader](#).

The data are updated from the VertexFX DDE server that requires administrator privileges for running RealTimeToDB.

You may disable unusable columns to reduce the server overhead.

The DDE server does not contain an actual data date field.

The DateTime, Date, and Time fields are updated using the PC time adjusted to the table time zone (Eastern Standard Time).

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	QuoteListVFX		
rtd	QuotesVFX	SELECT Code FROM rtd.QuoteListVFX	
rtd	QuoteDayHistoryVFX	SELECT Code FROM rtd.QuoteListVFX	
rtd	QuoteTimeHistoryVFX	SELECT Code FROM rtd.QuoteListVFX	
rtd	QuoteTickHistoryVFX	SELECT Code FROM rtd.QuoteListVFX	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	quote_list_vfx		
rtd	quotes_vfx	SELECT CODE FROM rtd.quote_list_vfx	
rtd	quote_day_history_vfx	SELECT CODE FROM rtd.quote_list_vfx	
rtd	quote_time_history_vfx	SELECT CODE FROM rtd.quote_list_vfx	
rtd	quote_tick_history_vfx	SELECT CODE FROM rtd.quote_list_vfx	1

Oracle Database, IBM DB2, and NuoDB:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	QUOTE_LIST_VFX		
RTD	QUOTES_VFX	SELECT CODE FROM RTD.QUOTE_LIST_VFX	
RTD	QUOTE_DAY_HISTORY_VFX	SELECT CODE FROM RTD.QUOTE_LIST_VFX	
RTD	QUOTE_TIME_HISTORY_VFX	SELECT CODE FROM RTD.QUOTE_LIST_VFX	
RTD	QUOTE_TICK_HISTORY_VFX	SELECT CODE FROM RTD.QUOTE_LIST_VFX	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.QuoteListVFX for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
EUR_USD
GBP_USD
USD_CHF
USD_JPY

rtd.quote\_list\_vfx for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL:

CODE
EUR_USD
GBP_USD
USD_CHF
USD_JPY

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	QuotesVFX	Code		Formula
rtd	QuotesVFX	Symbol	=VFX Name![Code]	PK
rtd	QuoteDayHistoryVFX	Code		Formula
rtd	QuoteDayHistoryVFX	Symbol	=VFX Name![Code]	PK
rtd	QuoteDayHistoryVFX	Date	=Date()	PK
rtd	QuoteTimeHistoryVFX	Code		Formula
rtd	QuoteTimeHistoryVFX	Symbol	=VFX Name![Code]	PK
rtd	QuoteTimeHistoryVFX	Date	=Date()	PK
rtd	QuoteTimeHistoryVFX	Time	=VFX Time![Code]	PK
rtd	QuoteTickHistoryVFX	Code		Formula
rtd	QuoteTickHistoryVFX	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	quotes_vfx	CODE		Formula
rtd	quotes_vfx	SYMBOL	=VFX Name![CODE]	PK
rtd	quote_day_history_vfx	CODE		Formula
rtd	quote_day_history_vfx	SYMBOL	=VFX Name![CODE]	PK
rtd	quote_day_history_vfx	DATE	=Date()	PK
rtd	quote_time_history_vfx	CODE		Formula
rtd	quote_time_history_vfx	SYMBOL	=VFX Name![CODE]	PK
rtd	quote_time_history_vfx	DATE	=Date()	PK
rtd	quote_time_history_vfx	TIME	=VFX Time![CODE]	PK
rtd	quote_tick_history_vfx	CODE		Formula
rtd	quote_tick_history_vfx	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	QUOTES_VFX	CODE		Formula
RTD	QUOTES_VFX	SYMBOL	=VFX Name![CODE]	PK
RTD	QUOTE_DAY_HISTORY_VFX	CODE		Formula
RTD	QUOTE_DAY_HISTORY_VFX	SYMBOL	=VFX Name![CODE]	PK
RTD	QUOTE_DAY_HISTORY_VFX	DATE	=Date()	PK
RTD	QUOTE_TICK_HISTORY_VFX	CODE		Formula
RTD	QUOTE_TICK_HISTORY_VFX	ID		PK, IDENTITY
RTD	QUOTE_TIME_HISTORY_VFX	CODE		Formula
RTD	QUOTE_TIME_HISTORY_VFX	SYMBOL	=VFX Name![CODE]	PK
RTD	QUOTE_TIME_HISTORY_VFX	DATE	=Date()	PK
RTD	QUOTE_TIME_HISTORY_VFX	TIME	=VFX Time![CODE]	PK

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.QuotesVFX

The table contains the last data values of currency pairs and futures from VertexFX Trader.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		Formula
Symbol	=VFX Name![Code]	PK
Date	=Date()	
Time	=VFX Time![Code]	
Bid	=VFX Bid![Code]	
Ask	=VFX Ask![Code]	
Open	=VFX OpenPrice![Code]	
High	=VFX High![Code]	
Low	=VFX Low![Code]	
Close	=VFX ClosePrice![Code]	
Change	=VFX NetChange![Code]	
PercentChange	=VFX PercentChange![Code]	
LastUpdateTimeStamp		

## rtd.QuoteDayHistoryVFX

The table contains day data history of currency pairs and futures from VertexFX Trader.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		Formula
Symbol	=VFX   Name! [Code]	PK
Date	=Date()	PK
Time	=VFX   Time! [Code]	
Bid	=VFX   Bid! [Code]	
Ask	=VFX   Ask! [Code]	
Open	=VFX   OpenPrice! [Code]	
High	=VFX   High! [Code]	
Low	=VFX   Low! [Code]	
Close	=VFX   ClosePrice! [Code]	
Change	=VFX   NetChange! [Code]	
PercentChange	=VFX   PercentChange! [Code]	
LastUpdateTimeStamp		

## rtd.QuoteTimeHistoryVFX

The table contains time data history of currency pairs and futures from VertexFX Trader.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		Formula
Symbol	=VFX   Name! [Code]	PK
Date	=Date()	PK
Time	=VFX   Time! [Code]	PK
Bid	=VFX   Bid! [Code]	
Ask	=VFX   Ask! [Code]	
Open	=VFX   OpenPrice! [Code]	
High	=VFX   High! [Code]	
Low	=VFX   Low! [Code]	
Close	=VFX   ClosePrice! [Code]	
Change	=VFX   NetChange! [Code]	
PercentChange	=VFX   PercentChange! [Code]	
LastUpdateTimeStamp		

## rtd.QuoteTickHistoryVFX

The table contains tick data history of currency pairs and futures from VertexFX Trader.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		Formula
ID		PK, IDENTITY
Symbol	=VFX   Name! [Code]	
Date	=Date()	
Time	=VFX   Time! [Code]	
Bid	=VFX   Bid! [Code]	
Ask	=VFX   Ask! [Code]	
Open	=VFX   OpenPrice! [Code]	
High	=VFX   High! [Code]	
Low	=VFX   Low! [Code]	
Close	=VFX   ClosePrice! [Code]	
Change	=VFX   NetChange! [Code]	
PercentChange	=VFX   PercentChange! [Code]	

## rtd.quotes\_vfx

The table contains the last data values of currency pairs and futures from VertexFX Trader.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		Formula
SYMBOL	=VFX   Name! [CODE]	PK
DATE	=Date()	
TIME	=VFX   Time! [CODE]	
BID	=VFX   Bid! [CODE]	
ASK	=VFX   Ask! [CODE]	
OPEN	=VFX   OpenPrice! [CODE]	
HIGH	=VFX   High! [CODE]	
LOW	=VFX   Low! [CODE]	
CLOSE	=VFX   ClosePrice! [CODE]	
CHANGE	=VFX   NetChange! [CODE]	
PERCENT_CHANGE	=VFX   PercentChange! [CODE]	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_day\_history\_vfx

The table contains day data history of currency pairs and futures from VertexFX Trader.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		Formula
SYMBOL	=VFX   Name! [CODE]	PK
DATE	=Date()	PK
TIME	=VFX   Time! [CODE]	
BID	=VFX   Bid! [CODE]	
ASK	=VFX   Ask! [CODE]	
OPEN	=VFX   OpenPrice! [CODE]	
HIGH	=VFX   High! [CODE]	
LOW	=VFX   Low! [CODE]	
CLOSE	=VFX   ClosePrice! [CODE]	
CHANGE	=VFX   NetChange! [CODE]	
PERCENT_CHANGE	=VFX   PercentChange! [CODE]	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_time\_history\_vfx

The table contains time data history of currency pairs and futures from VertexFX Trader.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		Formula
SYMBOL	=VFX   Name! [CODE]	PK
DATE	=Date()	PK
TIME	=VFX   Time! [CODE]	PK
BID	=VFX   Bid! [CODE]	
ASK	=VFX   Ask! [CODE]	
OPEN	=VFX   OpenPrice! [CODE]	
HIGH	=VFX   High! [CODE]	
LOW	=VFX   Low! [CODE]	
CLOSE	=VFX   ClosePrice! [CODE]	
CHANGE	=VFX   NetChange! [CODE]	
PERCENT_CHANGE	=VFX   PercentChange! [CODE]	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_tick\_history\_vfx

The table contains tick data history of currency pairs and futures from VertexFX Trader.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		Formula
ID		PK, IDENTITY
SYMBOL	=VFX Name! [CODE]	
DATE	=Date()	
TIME	=VFX Time! [CODE]	
BID	=VFX Bid! [CODE]	
ASK	=VFX Ask! [CODE]	
OPEN	=VFX OpenPrice! [CODE]	
HIGH	=VFX High! [CODE]	
LOW	=VFX Low! [CODE]	
CLOSE	=VFX ClosePrice! [CODE]	
CHANGE	=VFX NetChange! [CODE]	
PERCENT_CHANGE	=VFX PercentChange! [CODE]	

# Quotes from Yahoo! Finance

## Overview

The RTD database contains preconfigured tables for getting stock quotes from Yahoo! Finance using [RealTimeToExcel](#).

These data are available and activated by default. Just edit required symbols in the QuoteListYahoo table.

Yahoo! Finance data are delayed.

Use <http://finance.yahoo.com/> to find tickers.

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	QuoteListYahoo		
rtd	QuotesYahoo	SELECT Code AS Symbol FROM rtd.QuoteListYahoo	
rtd	QuoteDayHistoryYahoo	SELECT Code AS Symbol FROM rtd.QuoteListYahoo	
rtd	QuoteTimeHistoryYahoo	SELECT Code AS Symbol FROM rtd.QuoteListYahoo	
rtd	QuoteTickHistoryYahoo	SELECT Code AS Symbol FROM rtd.QuoteListYahoo	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	quote_list_yahoo		
rtd	quotes_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_yahoo	
rtd	quote_day_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_yahoo	
rtd	quote_time_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_yahoo	
rtd	quote_tick_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_yahoo	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	QUOTE_LIST_YAHOO		
RTD	QUOTES_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_YAHOO	
RTD	QUOTE_DAY_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_YAHOO	
RTD	QUOTE_TIME_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_YAHOO	
RTD	QUOTE_TICK_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_YAHOO	1

\* Click on the table name to go to the table description.

## Task Table Examples

rtd.QuoteListYahoo for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
AAPL
GOOG

rtd.quote\_list\_yahoo for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
AAPL
GOOG

Use <http://finance.yahoo.com/> to find tickers.

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	QuotesYahoo	Symbol	=RTD("gartle.rtd", "YahooFinanceWatchList",[Symbol],"Symbol")	PK
rtd	QuoteDayHistoryYahoo	Symbol	=RTD("gartle.rtd", "YahooFinanceWatchList",[Symbol],"Symbol")	PK
rtd	QuoteDayHistoryYahoo	LastTradeDate	=RTD("gartle.rtd", "YahooFinanceWatchList",	PK

			[Symbol],"LastTradeDate")	
rtd	QuoteTimeHistoryYahoo	Symbol	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Symbol")	PK
rtd	QuoteTimeHistoryYahoo	LastTradeDateTime	=RTD("gartle.rtd",,"YahooFinanceWatchList", [Symbol],"LastTradeDateTime")	PK
rtd	QuoteTickHistoryYahoo	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	quotes_yahoo	SYMBOL	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Symbol")	PK
rtd	quote_day_history_yahoo	SYMBOL	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Symbol")	PK
rtd	quote_day_history_yahoo	LAST_TRADE_DATE	=RTD("gartle.rtd",,"YahooFinanceWatchList", [SYMBOL],"LastTradeDate")	PK
rtd	quote_time_history_yahoo	SYMBOL	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Symbol")	PK
rtd	quote_time_history_yahoo	LAST_TRADE_DATETIME	=RTD("gartle.rtd",,"YahooFinanceWatchList", [SYMBOL],"LastTradeDateTime")	PK
rtd	quote_tick_history_yahoo	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	QUOTES_YAHOO	SYMBOL	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Symbol")	PK
RTD	QUOTE_DAY_HISTORY_YAHOO	SYMBOL	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Symbol")	PK
RTD	QUOTE_DAY_HISTORY_YAHOO	LAST_TRADE_DATE	=RTD("gartle.rtd",,"YahooFinanceWatchList", [SYMBOL],"LastTradeDate")	PK
RTD	QUOTE_TICK_HISTORY_YAHOO	ID		PK, IDENTITY
RTD	QUOTE_TIME_HISTORY_YAHOO	SYMBOL	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Symbol")	PK
RTD	QUOTE_TIME_HISTORY_YAHOO	LAST_TRADE_DATETIME	=RTD("gartle.rtd",,"YahooFinanceWatchList", [SYMBOL],"LastTradeDateTime")	PK

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.QuotesYahoo

The table contains the last data values of stock quotes from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Symbol")	PK
LastTradeDateTime	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"LastTradeDateTime")	
LastTradeDate	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"ChangeInPercent")	
Open	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Low")	
Volume	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Volume")	
LastUpdateTimeStamp		

### rtd.QuoteDayHistoryYahoo

The table contains day history of stock quotes from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Symbol")	PK
LastTradeDate	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"LastTradeDate")	PK
LastTradeTime	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"ChangeInPercent")	
Open	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Low")	
Volume	=RTD("gartle.rtd",,"YahooFinanceWatchList",[Symbol],"Volume")	
LastUpdateTimeStamp		



## rtd.QuoteTimeHistoryYahoo

The table contains time history of stock quotes from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Symbol")	PK
LastTradeDateTime	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "LastTradeDateTime")	PK
LastTradeDate	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "LastTradeTime")	
Last	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "ChangeInPercent")	
Open	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Open")	
High	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "High")	
Low	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Low")	
Volume	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Volume")	
LastUpdateTimeStamp		

## rtd.QuoteTickHistoryYahoo

The table contains tick history of stock quotes from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Symbol	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Symbol")	
LastTradeDateTime	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "LastTradeDateTime")	
LastTradeDate	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "LastTradeTime")	
Last	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "ChangeInPercent")	
Open	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Open")	
High	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "High")	
Low	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Low")	
Volume	=RTD("gartle.rtd", "YahooFinanceWatchList", [Symbol], "Volume")	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.quotes\_yahoo

The table contains the last data values of stock quotes from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "Symbol")	PK
LAST_TRADE_DATETIME	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "LastTradeDateTime")	
LAST_TRADE_DATE	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "LastTradeDate")	
LAST_TRADE_TIME	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "LastTradeTime")	
LAST	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "Last")	
CHANGE	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "Change")	
PERCENT_CHANGE	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "ChangeInPercent")	
OPEN	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "Open")	
HIGH	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "High")	
LOW	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "Low")	
VOLUME	=RTD("gartle.rtd", "YahooFinanceWatchList", [SYMBOL], "Volume")	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_day\_history\_yahoo

The table contains day history of stock quotes from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Symbol")	PK
LAST_TRADE_DATE	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"LastTradeDate")	PK
LAST_TRADE_TIME	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"LastTradeTime")	
LAST	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"ChangeInPercent")	
OPEN	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Low")	
VOLUME	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Volume")	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_time\_history\_yahoo

The table contains time history of stock quotes from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Symbol")	PK
LAST_TRADE_DATETIME	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"LastTradeDateTime")	PK
LAST_TRADE_DATE	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"LastTradeDate")	
LAST_TRADE_TIME	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"LastTradeTime")	
LAST	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"ChangeInPercent")	
OPEN	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Low")	
VOLUME	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Volume")	
LAST_UPDATE_TIMESTAMP		

## rtd.quote\_tick\_history\_yahoo

The table contains tick history of stock quotes from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
SYMBOL	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Symbol")	
LAST_TRADE_DATETIME	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"LastTradeDateTime")	
LAST_TRADE_DATE	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"LastTradeDate")	
LAST_TRADE_TIME	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"LastTradeTime")	
LAST	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"ChangeInPercent")	
OPEN	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Low")	
VOLUME	=RTD("gartle.rtd",,"YahooFinanceWatchList",[SYMBOL],"Volume")	

@rtd-database-quotes-msnmoney.htm

# Option Data from Thinkorswim thinkDesktop via TOS.RTD

## Overview

The RTD database contains preconfigured tables for getting real-time data from [Thinkorswim thinkDesktop](#).

Option tables are designed for getting data for options. Use quote tables for stocks, futures, and currency pairs.

Since RealTimeToDB 2.5, RTD functions are used by default.

To update existing DDE formulas, you may use patches from the database folders.

You may disable unusable columns to reduce the server overhead.

Note that Thinkorswim thinkDesktop can crash if more than 200 000 topics are being requested.

The RTD server does not contain an actual data time field.

The DateTime, Date, and Time fields are updated using the PC time adjusted to the table time zone (Eastern Standard Time).

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	OptionListTOS		
rtd	OptionsTOS	SELECT Code FROM rtd.OptionListTOS	
rtd	OptionDayHistoryTOS	SELECT Code FROM rtd.OptionListTOS	
rtd	OptionTickHistoryTOS	SELECT Code FROM rtd.OptionListTOS	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	option_list_tos		
rtd	options_tos	SELECT CODE FROM rtd.option_list_tos	
rtd	option_day_history_tos	SELECT CODE FROM rtd.option_list_tos	
rtd	option_tick_history_tos	SELECT CODE FROM rtd.option_list_tos	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	OPTION_LIST_TOS		
RTD	OPTIONS_TOS	SELECT CODE FROM RTD.OPTION_LIST_TOS	
RTD	OPTION_DAY_HISTORY_TOS	SELECT CODE FROM RTD.OPTION_LIST_TOS	
RTD	OPTION_TICK_HISTORY_TOS	SELECT CODE FROM RTD.OPTION_LIST_TOS	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.OptionListTOS for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
.AAPL150117C500
.AAPL150117C600
.AAPL150117P500
.AAPL150117P600

rtd.option\_list\_tos for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
.AAPL150117C500
.AAPL150117C600
.AAPL150117P500
.AAPL150117P600

### Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	OptionsTOS	Code		PK
rtd	OptionDayHistoryTOS	Code		PK
rtd	OptionDayHistoryTOS	Date	=Date()	PK
rtd	OptionTickHistoryTOS	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	options_tos	CODE		PK
rtd	option_day_history_tos	CODE		PK
rtd	option_day_history_tos	DATE	=Date()	PK
rtd	option_tick_history_tos	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	OPTIONS_TOS	CODE		PK
RTD	OPTION_DAY_HISTORY_TOS	CODE		PK
RTD	OPTION_DAY_HISTORY_TOS	DATE	=Date()	PK
RTD	OPTION_TICK_HISTORY_TOS	ID		PK, IDENTITY

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.OptionsTOS

The table contains the last values of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		PK
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Description	=RTD("tos.rtd", "DESCRIPTION", [Code])	
Last	=RTD("tos.rtd", "LAST", [Code])	
Change	=RTD("tos.rtd", "NET_CHANGE", [Code])	
PercentChange	=RTD("tos.rtd", "PERCENT_CHANGE", [Code])	
LastSize	=RTD("tos.rtd", "LAST_SIZE", [Code])	
LastX	=RTD("tos.rtd", "LX", [Code])	
Mark	=RTD("tos.rtd", "MARK", [Code])	
MarkChange	=RTD("tos.rtd", "MARK_CHANGE", [Code])	
MarkPercentChange	=RTD("tos.rtd", "MARK_PERCENT_CHANGE", [Code])	
Bid	=RTD("tos.rtd", "BID", [Code])	
Ask	=RTD("tos.rtd", "ASK", [Code])	
BidSize	=RTD("tos.rtd", "BID_SIZE", [Code])	
AskSize	=RTD("tos.rtd", "ASK_SIZE", [Code])	
BidAskSize	=RTD("tos.rtd", "BA_SIZE", [Code])	
BidX	=RTD("tos.rtd", "BX", [Code])	
AskX	=RTD("tos.rtd", "AX", [Code])	
Open	=RTD("tos.rtd", "OPEN", [Code])	
High	=RTD("tos.rtd", "HIGH", [Code])	
Low	=RTD("tos.rtd", "LOW", [Code])	
Close	=RTD("tos.rtd", "CLOSE", [Code])	
Volume	=RTD("tos.rtd", "VOLUME", [Code])	
OpenInt	=RTD("tos.rtd", "OPEN_INT", [Code])	
ImpliedVol	=RTD("tos.rtd", "IMPL_VOL", [Code])	
Delta	=RTD("tos.rtd", "DELTA", [Code])	
Gamma	=RTD("tos.rtd", "GAMMA", [Code])	
Theta	=RTD("tos.rtd", "THETA", [Code])	
Vega	=RTD("tos.rtd", "VEGA", [Code])	
Rho	=RTD("tos.rtd", "RHO", [Code])	
Extrinsic	=RTD("tos.rtd", "EXTRINSIC", [Code])	
Intrinsic	=RTD("tos.rtd", "INTRINSIC", [Code])	
ProbabilityITM	=RTD("tos.rtd", "PROB_OF_EXPIRING", [Code])	
ProbabilityOTM	=RTD("tos.rtd", "PROB_OTM", [Code])	
ProbabilityTouch	=RTD("tos.rtd", "PROB_OF_TOUCHING", [Code])	
CoveredReturn	=RTD("tos.rtd", "COVERED_RETURN", [Code])	
MaxCoveredReturn	=RTD("tos.rtd", "MAX_COVERED_RETURN", [Code])	

LastUpdateTimeStamp		
---------------------	--	--

## rtd.OptionDayHistoryTOS

The table contains day history of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		PK
Date	=Date()	PK
Time	=Time()	
Description	=RTD("tos.rtd",,"DESCRIPTION",[Code])	
Last	=RTD("tos.rtd",,"LAST",[Code])	
Change	=RTD("tos.rtd",,"NET_CHANGE",[Code])	
PercentChange	=RTD("tos.rtd",,"PERCENT_CHANGE",[Code])	
LastSize	=RTD("tos.rtd",,"LAST_SIZE",[Code])	
LastX	=RTD("tos.rtd",,"LX",[Code])	
Mark	=RTD("tos.rtd",,"MARK",[Code])	
MarkChange	=RTD("tos.rtd",,"MARK_CHANGE",[Code])	
MarkPercentChange	=RTD("tos.rtd",,"MARK_PERCENT_CHANGE",[Code])	
Bid	=RTD("tos.rtd",,"BID",[Code])	
Ask	=RTD("tos.rtd",,"ASK",[Code])	
BidSize	=RTD("tos.rtd",,"BID_SIZE",[Code])	
AskSize	=RTD("tos.rtd",,"ASK_SIZE",[Code])	
BidAskSize	=RTD("tos.rtd",,"BA_SIZE",[Code])	
BidX	=RTD("tos.rtd",,"BX",[Code])	
AskX	=RTD("tos.rtd",,"AX",[Code])	
Open	=RTD("tos.rtd",,"OPEN",[Code])	
High	=RTD("tos.rtd",,"HIGH",[Code])	
Low	=RTD("tos.rtd",,"LOW",[Code])	
Close	=RTD("tos.rtd",,"CLOSE",[Code])	
Volume	=RTD("tos.rtd",,"VOLUME",[Code])	
OpenInt	=RTD("tos.rtd",,"OPEN_INT",[Code])	
ImpliedVol	=RTD("tos.rtd",,"IMPL_VOL",[Code])	
Delta	=RTD("tos.rtd",,"DELTA",[Code])	
Gamma	=RTD("tos.rtd",,"GAMMA",[Code])	
Theta	=RTD("tos.rtd",,"THETA",[Code])	
Vega	=RTD("tos.rtd",,"VEGA",[Code])	
Rho	=RTD("tos.rtd",,"RHO",[Code])	
Extrinsic	=RTD("tos.rtd",,"EXTRINSIC",[Code])	
Intrinsic	=RTD("tos.rtd",,"INTRINSIC",[Code])	
ProbabilityITM	=RTD("tos.rtd",,"PROB_OF_EXPIRING",[Code])	
ProbabilityOTM	=RTD("tos.rtd",,"PROB_OTM",[Code])	
ProbabilityTouch	=RTD("tos.rtd",,"PROB_OF_TOUCHING",[Code])	
CoveredReturn	=RTD("tos.rtd",,"COVERED_RETURN",[Code])	
MaxCoveredReturn	=RTD("tos.rtd",,"MAX_COVERED_RETURN",[Code])	
LastUpdateTimeStamp		

## rtd.OptionTickHistoryTOS

The table contains tick history of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Code		
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Description	=RTD("tos.rtd", "DESCRIPTION",[Code])	
Last	=RTD("tos.rtd", "LAST",[Code])	
Change	=RTD("tos.rtd", "NET_CHANGE",[Code])	
PercentChange	=RTD("tos.rtd", "PERCENT_CHANGE",[Code])	
LastSize	=RTD("tos.rtd", "LAST_SIZE",[Code])	
LastX	=RTD("tos.rtd", "LX",[Code])	
Mark	=RTD("tos.rtd", "MARK",[Code])	
MarkChange	=RTD("tos.rtd", "MARK_CHANGE",[Code])	
MarkPercentChange	=RTD("tos.rtd", "MARK_PERCENT_CHANGE",[Code])	
Bid	=RTD("tos.rtd", "BID",[Code])	
Ask	=RTD("tos.rtd", "ASK",[Code])	
BidSize	=RTD("tos.rtd", "BID_SIZE",[Code])	
AskSize	=RTD("tos.rtd", "ASK_SIZE",[Code])	
BidAskSize	=RTD("tos.rtd", "BA_SIZE",[Code])	
BidX	=RTD("tos.rtd", "BX",[Code])	
AskX	=RTD("tos.rtd", "AX",[Code])	
Open	=RTD("tos.rtd", "OPEN",[Code])	
High	=RTD("tos.rtd", "HIGH",[Code])	
Low	=RTD("tos.rtd", "LOW",[Code])	
Close	=RTD("tos.rtd", "CLOSE",[Code])	
Volume	=RTD("tos.rtd", "VOLUME",[Code])	
OpenInt	=RTD("tos.rtd", "OPEN_INT",[Code])	
ImpliedVol	=RTD("tos.rtd", "IMPL_VOL",[Code])	
Delta	=RTD("tos.rtd", "DELTA",[Code])	
Gamma	=RTD("tos.rtd", "GAMMA",[Code])	
Theta	=RTD("tos.rtd", "THETA",[Code])	
Vega	=RTD("tos.rtd", "VEGA",[Code])	
Rho	=RTD("tos.rtd", "RHO",[Code])	
Extrinsic	=RTD("tos.rtd", "EXTRINSIC",[Code])	
Intrinsic	=RTD("tos.rtd", "INTRINSIC",[Code])	
ProbabilityITM	=RTD("tos.rtd", "PROB_OF_EXPIRING",[Code])	
ProbabilityOTM	=RTD("tos.rtd", "PROB_OTM",[Code])	
ProbabilityTouch	=RTD("tos.rtd", "PROB_OF_TOUCHING",[Code])	
CoveredReturn	=RTD("tos.rtd", "COVERED_RETURN",[Code])	
MaxCoveredReturn	=RTD("tos.rtd", "MAX_COVERED_RETURN",[Code])	

## rtd.options\_tos

The table contains the last values of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		PK
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
DESCRIPTION	=RTD("tos.rtd",,"DESCRIPTION",[CODE])	
LAST	=RTD("tos.rtd",,"LAST",[CODE])	
CHANGE	=RTD("tos.rtd",,"NET_CHANGE",[CODE])	
PERCENT_CHANGE	=RTD("tos.rtd",,"PERCENT_CHANGE",[CODE])	
LAST_SIZE	=RTD("tos.rtd",,"LAST_SIZE",[CODE])	
LAST_X	=RTD("tos.rtd",,"LX",[CODE])	
MARK	=RTD("tos.rtd",,"MARK",[CODE])	
MARK_CHANGE	=RTD("tos.rtd",,"MARK_CHANGE",[CODE])	
MARK_PERCENT_CHANGE	=RTD("tos.rtd",,"MARK_PERCENT_CHANGE",[CODE])	
BID	=RTD("tos.rtd",,"BID",[CODE])	
ASK	=RTD("tos.rtd",,"ASK",[CODE])	
BID_SIZE	=RTD("tos.rtd",,"BID_SIZE",[CODE])	
ASK_SIZE	=RTD("tos.rtd",,"ASK_SIZE",[CODE])	
BID_ASK_SIZE	=RTD("tos.rtd",,"BA_SIZE",[CODE])	
BID_X	=RTD("tos.rtd",,"BX",[CODE])	
ASK_X	=RTD("tos.rtd",,"AX",[CODE])	
OPEN	=RTD("tos.rtd",,"OPEN",[CODE])	
HIGH	=RTD("tos.rtd",,"HIGH",[CODE])	
LOW	=RTD("tos.rtd",,"LOW",[CODE])	
CLOSE	=RTD("tos.rtd",,"CLOSE",[CODE])	
VOLUME	=RTD("tos.rtd",,"VOLUME",[CODE])	
OPEN_INT	=RTD("tos.rtd",,"OPEN_INT",[CODE])	
IMPLIED_VOL	=RTD("tos.rtd",,"IMPL_VOL",[CODE])	
DELTA	=RTD("tos.rtd",,"DELTA",[CODE])	
GAMMA	=RTD("tos.rtd",,"GAMMA",[CODE])	
THETA	=RTD("tos.rtd",,"THETA",[CODE])	
VEGA	=RTD("tos.rtd",,"VEGA",[CODE])	
RHO	=RTD("tos.rtd",,"RHO",[CODE])	
EXTRINSIC	=RTD("tos.rtd",,"EXTRINSIC",[CODE])	
INTRINSIC	=RTD("tos.rtd",,"INTRINSIC",[CODE])	
PROBABILITY_ITM	=RTD("tos.rtd",,"PROB_OF_EXPIRING",[CODE])	
PROBABILITY_OTM	=RTD("tos.rtd",,"PROB_OTM",[CODE])	
PROBABILITY_TOUCH	=RTD("tos.rtd",,"PROB_OF_TOUCHING",[CODE])	
COVERED_RETURN	=RTD("tos.rtd",,"COVERED_RETURN",[CODE])	
MAX_COVERED_RETURN	=RTD("tos.rtd",,"MAX_COVERED_RETURN",[CODE])	
LAST_UPDATE_TIMESTAMP		



## rtd.option\_day\_history\_tos

The table contains day history of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		PK
DATE	=Date()	PK
TIME	=Time()	
DESCRIPTION	=RTD("tos.rtd",,"DESCRIPTION",[CODE])	
LAST	=RTD("tos.rtd",,"LAST",[CODE])	
CHANGE	=RTD("tos.rtd",,"NET_CHANGE",[CODE])	
PERCENT_CHANGE	=RTD("tos.rtd",,"PERCENT_CHANGE",[CODE])	
LAST_SIZE	=RTD("tos.rtd",,"LAST_SIZE",[CODE])	
LAST_X	=RTD("tos.rtd",,"LX",[CODE])	
MARK	=RTD("tos.rtd",,"MARK",[CODE])	
MARK_CHANGE	=RTD("tos.rtd",,"MARK_CHANGE",[CODE])	
MARK_PERCENT_CHANGE	=RTD("tos.rtd",,"MARK_PERCENT_CHANGE",[CODE])	
BID	=RTD("tos.rtd",,"BID",[CODE])	
ASK	=RTD("tos.rtd",,"ASK",[CODE])	
BID_SIZE	=RTD("tos.rtd",,"BID_SIZE",[CODE])	
ASK_SIZE	=RTD("tos.rtd",,"ASK_SIZE",[CODE])	
BID_ASK_SIZE	=RTD("tos.rtd",,"BA_SIZE",[CODE])	
BID_X	=RTD("tos.rtd",,"BX",[CODE])	
ASK_X	=RTD("tos.rtd",,"AX",[CODE])	
OPEN	=RTD("tos.rtd",,"OPEN",[CODE])	
HIGH	=RTD("tos.rtd",,"HIGH",[CODE])	
LOW	=RTD("tos.rtd",,"LOW",[CODE])	
CLOSE	=RTD("tos.rtd",,"CLOSE",[CODE])	
VOLUME	=RTD("tos.rtd",,"VOLUME",[CODE])	
OPEN_INT	=RTD("tos.rtd",,"OPEN_INT",[CODE])	
IMPLIED_VOL	=RTD("tos.rtd",,"IMPL_VOL",[CODE])	
DELTA	=RTD("tos.rtd",,"DELTA",[CODE])	
GAMMA	=RTD("tos.rtd",,"GAMMA",[CODE])	
THETA	=RTD("tos.rtd",,"THETA",[CODE])	
VEGA	=RTD("tos.rtd",,"VEGA",[CODE])	
RHO	=RTD("tos.rtd",,"RHO",[CODE])	
EXTRINSIC	=RTD("tos.rtd",,"EXTRINSIC",[CODE])	
INTRINSIC	=RTD("tos.rtd",,"INTRINSIC",[CODE])	
PROBABILITY_ITM	=RTD("tos.rtd",,"PROB_OF_EXPIRING",[CODE])	
PROBABILITY_OTM	=RTD("tos.rtd",,"PROB_OTM",[CODE])	
PROBABILITY_TOUCH	=RTD("tos.rtd",,"PROB_OF_TOUCHING",[CODE])	
COVERED_RETURN	=RTD("tos.rtd",,"COVERED_RETURN",[CODE])	
MAX_COVERED_RETURN	=RTD("tos.rtd",,"MAX_COVERED_RETURN",[CODE])	
LAST_UPDATE_TIMESTAMP		

## rtd.option\_tick\_history\_tos

The table contains tick history of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
CODE		
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
DESCRIPTION	=RTD("tos.rtd", "DESCRIPTION", [CODE])	
LAST	=RTD("tos.rtd", "LAST", [CODE])	
CHANGE	=RTD("tos.rtd", "NET_CHANGE", [CODE])	
PERCENT_CHANGE	=RTD("tos.rtd", "PERCENT_CHANGE", [CODE])	
LAST_SIZE	=RTD("tos.rtd", "LAST_SIZE", [CODE])	
LAST_X	=RTD("tos.rtd", "LX", [CODE])	
MARK	=RTD("tos.rtd", "MARK", [CODE])	
MARK_CHANGE	=RTD("tos.rtd", "MARK_CHANGE", [CODE])	
MARK_PERCENT_CHANGE	=RTD("tos.rtd", "MARK_PERCENT_CHANGE", [CODE])	
BID	=RTD("tos.rtd", "BID", [CODE])	
ASK	=RTD("tos.rtd", "ASK", [CODE])	
BID_SIZE	=RTD("tos.rtd", "BID_SIZE", [CODE])	
ASK_SIZE	=RTD("tos.rtd", "ASK_SIZE", [CODE])	
BID_ASK_SIZE	=RTD("tos.rtd", "BA_SIZE", [CODE])	
BID_X	=RTD("tos.rtd", "BX", [CODE])	
ASK_X	=RTD("tos.rtd", "AX", [CODE])	
OPEN	=RTD("tos.rtd", "OPEN", [CODE])	
HIGH	=RTD("tos.rtd", "HIGH", [CODE])	
LOW	=RTD("tos.rtd", "LOW", [CODE])	
CLOSE	=RTD("tos.rtd", "CLOSE", [CODE])	
VOLUME	=RTD("tos.rtd", "VOLUME", [CODE])	
OPEN_INT	=RTD("tos.rtd", "OPEN_INT", [CODE])	
IMPLIED_VOL	=RTD("tos.rtd", "IMPL_VOL", [CODE])	
DELTA	=RTD("tos.rtd", "DELTA", [CODE])	
GAMMA	=RTD("tos.rtd", "GAMMA", [CODE])	
THETA	=RTD("tos.rtd", "THETA", [CODE])	
VEGA	=RTD("tos.rtd", "VEGA", [CODE])	
RHO	=RTD("tos.rtd", "RHO", [CODE])	
EXTRINSIC	=RTD("tos.rtd", "EXTRINSIC", [CODE])	
INTRINSIC	=RTD("tos.rtd", "INTRINSIC", [CODE])	
PROBABILITY_ITM	=RTD("tos.rtd", "PROB_OF_EXPIRING", [CODE])	
PROBABILITY_OTM	=RTD("tos.rtd", "PROB_OTM", [CODE])	
PROBABILITY_TOUCH	=RTD("tos.rtd", "PROB_OF_TOUCHING", [CODE])	
COVERED_RETURN	=RTD("tos.rtd", "COVERED_RETURN", [CODE])	
MAX_COVERED_RETURN	=RTD("tos.rtd", "MAX_COVERED_RETURN", [CODE])	

# Option Data from Thinkorswim thinkDesktop via DDE

## Overview

The RTD database contains preconfigured tables for getting real-time data from [Thinkorswim thinkDesktop](#).

Option tables are designed for getting data for options. Use quote tables for stocks, futures, and currency pairs.

Since RealTimeToDB 2.5, the default formulas use the tos.rtd server, not DDE.

You may change RTD formulas to DDE using the patches from the database folders.

The data are updated from the thinkDesktop DDE server that requires administrator privileges for running RealTimeToDB.

You may disable unusable columns to reduce the server overhead.

The DDE server does not contain an actual data time field.

The DateTime, Date, and Time fields are updated using the PC time adjusted to the table time zone (Eastern Standard Time).

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	OptionListTOS		
rtd	OptionsTOS	SELECT Code FROM rtd.OptionListTOS	
rtd	OptionDayHistoryTOS	SELECT Code FROM rtd.OptionListTOS	
rtd	OptionTickHistoryTOS	SELECT Code FROM rtd.OptionListTOS	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	option_list_tos		
rtd	options_tos	SELECT CODE FROM rtd.option_list_tos	
rtd	option_day_history_tos	SELECT CODE FROM rtd.option_list_tos	
rtd	option_tick_history_tos	SELECT CODE FROM rtd.option_list_tos	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	OPTION_LIST_TOS		
RTD	OPTIONS_TOS	SELECT CODE FROM RTD.OPTION_LIST_TOS	
RTD	OPTION_DAY_HISTORY_TOS	SELECT CODE FROM RTD.OPTION_LIST_TOS	
RTD	OPTION_TICK_HISTORY_TOS	SELECT CODE FROM RTD.OPTION_LIST_TOS	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.OptionListTOS for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
.AAPL150117C500
.AAPL150117C600
.AAPL150117P500
.AAPL150117P600

rtd.option\_list\_tos for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
.AAPL150117C500
.AAPL150117C600
.AAPL150117P500
.AAPL150117P600

### Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	OptionsTOS	Code		PK
rtd	OptionDayHistoryTOS	Code		PK
rtd	OptionDayHistoryTOS	Date	=Date()	PK
rtd	OptionTickHistoryTOS	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	options_tos	CODE		PK
rtd	option_day_history_tos	CODE		PK
rtd	option_day_history_tos	DATE	=Date()	PK
rtd	option_tick_history_tos	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	OPTIONS_TOS	CODE		PK
RTD	OPTION_DAY_HISTORY_TOS	CODE		PK
RTD	OPTION_DAY_HISTORY_TOS	DATE	=Date()	PK
RTD	OPTION_TICK_HISTORY_TOS	ID		PK, IDENTITY

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.OptionsTOS

The table contains the last values of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		PK
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Description	=TOS DESCRIPTION!'[Code]'	
Last	=TOS LAST!'[Code]'	
Change	=TOS NET_CHANGE!'[Code]'	
PercentChange	=TOS PERCENT_CHANGE!'[Code]'	
LastSize	=TOS LAST_SIZE!'[Code]'	
LastX	=TOS LX!'[Code]'	
Mark	=TOS MARK!'[Code]'	
MarkChange	=TOS MARK_CHANGE!'[Code]'	
MarkPercentChange	=TOS MARK_PERCENT_CHANGE!'[Code]'	
Bid	=TOS BID!'[Code]'	
Ask	=TOS ASK!'[Code]'	
BidSize	=TOS BID_SIZE!'[Code]'	
AskSize	=TOS ASK_SIZE!'[Code]'	
BidAskSize	=TOS BA_SIZE!'[Code]'	
BidX	=TOS BX!'[Code]'	
AskX	=TOS AX!'[Code]'	
Open	=TOS OPEN!'[Code]'	
High	=TOS HIGH!'[Code]'	
Low	=TOS LOW!'[Code]'	
Close	=TOS Close!'[Code]'	
Volume	=TOS VOLUME!'[Code]'	
OpenInt	=TOS OPEN_INT!'[Code]'	
ImpliedVol	=TOS IMPL_VOL!'[Code]'	
Delta	=TOS DELTA!'[Code]'	
Gamma	=TOS GAMMA!'[Code]'	
Theta	=TOS THETA!'[Code]'	
Vega	=TOS VEGA!'[Code]'	
Rho	=TOS RHO!'[Code]'	
Extrinsic	=TOS EXTRINSIC!'[Code]'	
Intrinsic	=TOS INTRINSIC!'[Code]'	
ProbabilityITM	=TOS PROB_OF_EXPIRING!'[Code]'	
ProbabilityOTM	=TOS PROB_OTM!'[Code]'	
ProbabilityTouch	=TOS PROB_OF_TOUCHING!'[Code]'	
CoveredReturn	=TOS COVERED_RETURN!'[Code]'	
MaxCoveredReturn	=TOS MAX_COVERED_RETURN!'[Code]'	

LastUpdateTimeStamp		
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## rtd.OptionDayHistoryTOS

The table contains day history of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		PK
Date	=Date()	PK
Time	=Time()	
Description	=TOS DESCRIPTION!'[Code]'	
Last	=TOS LAST!'[Code]'	
Change	=TOS NET_CHANGE!'[Code]'	
PercentChange	=TOS PERCENT_CHANGE!'[Code]'	
LastSize	=TOS LAST_SIZE!'[Code]'	
LastX	=TOS LX!'[Code]'	
Mark	=TOS MARK!'[Code]'	
MarkChange	=TOS MARK_CHANGE!'[Code]'	
MarkPercentChange	=TOS MARK_PERCENT_CHANGE!'[Code]'	
Bid	=TOS BID!'[Code]'	
Ask	=TOS ASK!'[Code]'	
BidSize	=TOS BID_SIZE!'[Code]'	
AskSize	=TOS ASK_SIZE!'[Code]'	
BidAskSize	=TOS BA_SIZE!'[Code]'	
BidX	=TOS BX!'[Code]'	
AskX	=TOS AX!'[Code]'	
Open	=TOS OPEN!'[Code]'	
High	=TOS HIGH!'[Code]'	
Low	=TOS LOW!'[Code]'	
Close	=TOS Close!'[Code]'	
Volume	=TOS VOLUME!'[Code]'	
OpenInt	=TOS OPEN_INT!'[Code]'	
ImpliedVol	=TOS IMPL_VOL!'[Code]'	
Delta	=TOS DELTA!'[Code]'	
Gamma	=TOS GAMMA!'[Code]'	
Theta	=TOS THETA!'[Code]'	
Vega	=TOS VEGA!'[Code]'	
Rho	=TOS RHO!'[Code]'	
Extrinsic	=TOS EXTRINSIC!'[Code]'	
Intrinsic	=TOS INTRINSIC!'[Code]'	
ProbabilityITM	=TOS PROB_OF_EXPIRING!'[Code]'	
ProbabilityOTM	=TOS PROB_OTM!'[Code]'	
ProbabilityTouch	=TOS PROB_OF_TOUCHING!'[Code]'	
CoveredReturn	=TOS COVERED_RETURN!'[Code]'	
MaxCoveredReturn	=TOS MAX_COVERED_RETURN!'[Code]'	
LastUpdateTimeStamp		

## rtd.OptionTickHistoryTOS

The table contains tick history of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Code		
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Description	=TOS DESCRIPTION!'[Code]'	
Last	=TOS LAST!'[Code]'	
Change	=TOS NET_CHANGE!'[Code]'	
PercentChange	=TOS PERCENT_CHANGE!'[Code]'	
LastSize	=TOS LAST_SIZE!'[Code]'	
LastX	=TOS LX!'[Code]'	
Mark	=TOS MARK!'[Code]'	
MarkChange	=TOS MARK_CHANGE!'[Code]'	
MarkPercentChange	=TOS MARK_PERCENT_CHANGE!'[Code]'	
Bid	=TOS BID!'[Code]'	
Ask	=TOS ASK!'[Code]'	
BidSize	=TOS BID_SIZE!'[Code]'	
AskSize	=TOS ASK_SIZE!'[Code]'	
BidAskSize	=TOS BA_SIZE!'[Code]'	
BidX	=TOS BX!'[Code]'	
AskX	=TOS AX!'[Code]'	
Open	=TOS OPEN!'[Code]'	
High	=TOS HIGH!'[Code]'	
Low	=TOS LOW!'[Code]'	
Close	=TOS Close!'[Code]'	
Volume	=TOS VOLUME!'[Code]'	
OpenInt	=TOS OPEN_INT!'[Code]'	
ImpliedVol	=TOS IMPL_VOL!'[Code]'	
Delta	=TOS DELTA!'[Code]'	
Gamma	=TOS GAMMA!'[Code]'	
Theta	=TOS THETA!'[Code]'	
Vega	=TOS VEGA!'[Code]'	
Rho	=TOS RHO!'[Code]'	
Extrinsic	=TOS EXTRINSIC!'[Code]'	
Intrinsic	=TOS INTRINSIC!'[Code]'	
ProbabilityITM	=TOS PROB_OF_EXPIRING!'[Code]'	
ProbabilityOTM	=TOS PROB_OTM!'[Code]'	
ProbabilityTouch	=TOS PROB_OF_TOUCHING!'[Code]'	
CoveredReturn	=TOS COVERED_RETURN!'[Code]'	
MaxCoveredReturn	=TOS MAX_COVERED_RETURN!'[Code]'	

## rtd.options\_tos

The table contains the last values of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		PK
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
DESCRIPTION	=TOS DESCRIPTION!'[CODE]'	
LAST	=TOS LAST!'[CODE]'	
CHANGE	=TOS NET_CHANGE!'[CODE]'	
PERCENT_CHANGE	=TOS PERCENT_CHANGE!'[CODE]'	
LAST_SIZE	=TOS LAST_SIZE!'[CODE]'	
LAST_X	=TOS LX!'[CODE]'	
MARK	=TOS MARK!'[CODE]'	
MARK_CHANGE	=TOS MARK_CHANGE!'[CODE]'	
MARK_PERCENT_CHANGE	=TOS MARK_PERCENT_CHANGE!'[CODE]'	
BID	=TOS BID!'[CODE]'	
ASK	=TOS ASK!'[CODE]'	
BID_SIZE	=TOS BID_SIZE!'[CODE]'	
ASK_SIZE	=TOS ASK_SIZE!'[CODE]'	
BID_ASK_SIZE	=TOS BA_SIZE!'[CODE]'	
BID_X	=TOS BX!'[CODE]'	
ASK_X	=TOS AX!'[CODE]'	
OPEN	=TOS OPEN!'[CODE]'	
HIGH	=TOS HIGH!'[CODE]'	
LOW	=TOS LOW!'[CODE]'	
CLOSE	=TOS Close!'[CODE]'	
VOLUME	=TOS VOLUME!'[CODE]'	
OPEN_INT	=TOS OPEN_INT!'[CODE]'	
IMPLIED_VOL	=TOS IMPL_VOL!'[CODE]'	
DELTA	=TOS DELTA!'[CODE]'	
GAMMA	=TOS GAMMA!'[CODE]'	
THETA	=TOS THETA!'[CODE]'	
VEGA	=TOS VEGA!'[CODE]'	
RHO	=TOS RHO!'[CODE]'	
EXTRINSIC	=TOS EXTRINSIC!'[CODE]'	
INTRINSIC	=TOS INTRINSIC!'[CODE]'	
PROBABILITY_ITM	=TOS PROB_OF_EXPIRING!'[CODE]'	
PROBABILITY_OTM	=TOS PROB_OTM!'[CODE]'	
PROBABILITY_TOUCH	=TOS PROB_OF_TOUCHING!'[CODE]'	
COVERED_RETURN	=TOS COVERED_RETURN!'[CODE]'	
MAX_COVERED_RETURN	=TOS MAX_COVERED_RETURN!'[CODE]'	
LAST_UPDATE_TIMESTAMP		



## rtd.option\_day\_history\_tos

The table contains day history of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		PK
DATE	=Date()	PK
TIME	=Time()	
DESCRIPTION	=TOS DESCRIPTION!'[CODE]'	
LAST	=TOS LAST!'[CODE]'	
CHANGE	=TOS NET_CHANGE!'[CODE]'	
PERCENT_CHANGE	=TOS PERCENT_CHANGE!'[CODE]'	
LAST_SIZE	=TOS LAST_SIZE!'[CODE]'	
LAST_X	=TOS LX!'[CODE]'	
MARK	=TOS MARK!'[CODE]'	
MARK_CHANGE	=TOS MARK_CHANGE!'[CODE]'	
MARK_PERCENT_CHANGE	=TOS MARK_PERCENT_CHANGE!'[CODE]'	
BID	=TOS BID!'[CODE]'	
ASK	=TOS ASK!'[CODE]'	
BID_SIZE	=TOS BID_SIZE!'[CODE]'	
ASK_SIZE	=TOS ASK_SIZE!'[CODE]'	
BID_ASK_SIZE	=TOS BA_SIZE!'[CODE]'	
BID_X	=TOS BX!'[CODE]'	
ASK_X	=TOS AX!'[CODE]'	
OPEN	=TOS OPEN!'[CODE]'	
HIGH	=TOS HIGH!'[CODE]'	
LOW	=TOS LOW!'[CODE]'	
CLOSE	=TOS Close!'[CODE]'	
VOLUME	=TOS VOLUME!'[CODE]'	
OPEN_INT	=TOS OPEN_INT!'[CODE]'	
IMPLIED_VOL	=TOS IMPL_VOL!'[CODE]'	
DELTA	=TOS DELTA!'[CODE]'	
GAMMA	=TOS GAMMA!'[CODE]'	
THETA	=TOS THETA!'[CODE]'	
VEGA	=TOS VEGA!'[CODE]'	
RHO	=TOS RHO!'[CODE]'	
EXTRINSIC	=TOS EXTRINSIC!'[CODE]'	
INTRINSIC	=TOS INTRINSIC!'[CODE]'	
PROBABILITY_ITM	=TOS PROB_OF_EXPIRING!'[CODE]'	
PROBABILITY_OTM	=TOS PROB_OTM!'[CODE]'	
PROBABILITY_TOUCH	=TOS PROB_OF_TOUCHING!'[CODE]'	
COVERED_RETURN	=TOS COVERED_RETURN!'[CODE]'	
MAX_COVERED_RETURN	=TOS MAX_COVERED_RETURN!'[CODE]'	
LAST_UPDATE_TIMESTAMP		

## rtd.option\_tick\_history\_tos

The table contains tick history of option data from Thinkorswim thinkDesktop.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
CODE		
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
DESCRIPTION	=TOS DESCRIPTION!'[CODE]'	
LAST	=TOS LAST!'[CODE]'	
CHANGE	=TOS NET_CHANGE!'[CODE]'	
PERCENT_CHANGE	=TOS PERCENT_CHANGE!'[CODE]'	
LAST_SIZE	=TOS LAST_SIZE!'[CODE]'	
LAST_X	=TOS LX!'[CODE]'	
MARK	=TOS MARK!'[CODE]'	
MARK_CHANGE	=TOS MARK_CHANGE!'[CODE]'	
MARK_PERCENT_CHANGE	=TOS MARK_PERCENT_CHANGE!'[CODE]'	
BID	=TOS BID!'[CODE]'	
ASK	=TOS ASK!'[CODE]'	
BID_SIZE	=TOS BID_SIZE!'[CODE]'	
ASK_SIZE	=TOS ASK_SIZE!'[CODE]'	
BID_ASK_SIZE	=TOS BA_SIZE!'[CODE]'	
BID_X	=TOS BX!'[CODE]'	
ASK_X	=TOS AX!'[CODE]'	
OPEN	=TOS OPEN!'[CODE]'	
HIGH	=TOS HIGH!'[CODE]'	
LOW	=TOS LOW!'[CODE]'	
CLOSE	=TOS Close!'[CODE]'	
VOLUME	=TOS VOLUME!'[CODE]'	
OPEN_INT	=TOS OPEN_INT!'[CODE]'	
IMPLIED_VOL	=TOS IMPL_VOL!'[CODE]'	
DELTA	=TOS DELTA!'[CODE]'	
GAMMA	=TOS GAMMA!'[CODE]'	
THETA	=TOS THETA!'[CODE]'	
VEGA	=TOS VEGA!'[CODE]'	
RHO	=TOS RHO!'[CODE]'	
EXTRINSIC	=TOS EXTRINSIC!'[CODE]'	
INTRINSIC	=TOS INTRINSIC!'[CODE]'	
PROBABILITY_ITM	=TOS PROB_OF_EXPIRING!'[CODE]'	
PROBABILITY_OTM	=TOS PROB_OTM!'[CODE]'	
PROBABILITY_TOUCH	=TOS PROB_OF_TOUCHING!'[CODE]'	
COVERED_RETURN	=TOS COVERED_RETURN!'[CODE]'	
MAX_COVERED_RETURN	=TOS MAX_COVERED_RETURN!'[CODE]'	

# Option Data from InteractiveBrokers Trader Workstation (TWS)

## Overview

The RTD database contains preconfigured tables for getting real-time data from [InteractiveBrokers Trader Workstation \(TWS\)](#).

Option tables are designed for getting data for options. Use quote tables for stocks, futures, and currency pairs.

The data are updated from the DDE server.

You may disable unusable columns to reduce the server overhead.

The DDE server does not contain an actual data time field.

The DateTime, Date, and Time fields are updated using the PC time adjusted to the table time zone (Eastern Standard Time).

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	OptionsTWS	SELECT TickId, Code FROM rtd.QuoteListTWS WHERE Code LIKE '%_OPT_20%'	
rtd	OptionDayHistoryTWS	SELECT TickId, Code FROM rtd.QuoteListTWS WHERE Code LIKE '%_OPT_20%'	
rtd	OptionTickHistoryTWS	SELECT TickId, Code FROM rtd.QuoteListTWS WHERE Code LIKE '%_OPT_20%'	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	options_tws	SELECT TICK_ID, CODE FROM rtd.quote_list_tws WHERE CODE LIKE '%_OPT_20%'	
rtd	option_day_history_tws	SELECT TICK_ID, CODE FROM rtd.quote_list_tws WHERE CODE LIKE '%_OPT_20%'	
rtd	option_tick_history_tws	SELECT TICK_ID, CODE FROM rtd.quote_list_tws WHERE CODE LIKE '%_OPT_20%'	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	OPTIONS_TWS	SELECT TICK_ID, CODE FROM RTD.QUOTE_LIST_TWS WHERE CODE LIKE '%_OPT_20%'	
RTD	OPTION_DAY_HISTORY_TWS	SELECT TICK_ID, CODE FROM RTD.QUOTE_LIST_TWS WHERE CODE LIKE '%_OPT_20%'	
RTD	OPTION_TICK_HISTORY_TWS	SELECT TICK_ID, CODE FROM RTD.QUOTE_LIST_TWS WHERE CODE LIKE '%_OPT_20%'	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.QuoteListTWS for Microsoft SQL Server and Microsoft SQL Server Compact:

TickId	Code
1	AAPL
2	GOOG
8	AAPL_OPT_20150116_500_C_100_SMART_USD_~
9	AAPL_OPT_20150116_600_C_100_SMART_USD_~

rtd.quote\_list\_tws for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

TICK_ID	CODE
1	AAPL
2	GOOG
8	AAPL_OPT_20150116_500_C_100_SMART_USD_~
9	AAPL_OPT_20150116_600_C_100_SMART_USD_~

The task table contains tickers for quote and option tables as the TWS DDE server requires ticker registration using the TickId field.

Accordingly, option table tasks select option tickers only.

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	OptionsTWS	Req	=S tik!'id[TickId]?req?[Code]'	Formula
rtd	OptionsTWS	TickId		Formula
rtd	OptionsTWS	Code		PK
rtd	OptionDayHistoryTWS	Req	=S tik!'id[TickId]?req?[Code]'	Formula
rtd	OptionDayHistoryTWS	TickId		Formula
rtd	OptionDayHistoryTWS	Code		PK
rtd	OptionDayHistoryTWS	Date	=Date()	PK
rtd	OptionTickHistoryTWS	Req	=S tik!'id[TickId]?req?[Code]'	Formula
rtd	OptionTickHistoryTWS	TickId		Formula
rtd	OptionTickHistoryTWS	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	options_tws	REQ	=S tik!'id[TICK_ID]?req?[Code]'	Formula
rtd	options_tws	TICK_ID		Formula
rtd	options_tws	CODE		PK
rtd	option_day_history_tws	REQ	=S tik!'id[TICK_ID]?req?[Code]'	Formula
rtd	option_day_history_tws	TICK_ID		Formula
rtd	option_day_history_tws	CODE		PK
rtd	option_day_history_tws	DATE	=Date()	PK
rtd	option_tick_history_tws	REQ	=S tik!'id[TICK_ID]?req?[Code]'	Formula
rtd	option_tick_history_tws	TICK_ID		Formula
rtd	option_tick_history_tws	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	OPTIONS_TWS	REQ	=S tik!'id[TICK_ID]?req?[Code]'	Formula
RTD	OPTIONS_TWS	TICK_ID		Formula
RTD	OPTIONS_TWS	CODE		PK
RTD	OPTION_DAY_HISTORY_TWS	REQ	=S tik!'id[TICK_ID]?req?[Code]'	Formula
RTD	OPTION_DAY_HISTORY_TWS	TICK_ID		Formula
RTD	OPTION_DAY_HISTORY_TWS	CODE		PK
RTD	OPTION_DAY_HISTORY_TWS	DATE	=Date()	PK
RTD	OPTION_TICK_HISTORY_TWS	REQ	=S tik!'id[TICK_ID]?req?[Code]'	Formula
RTD	OPTION_TICK_HISTORY_TWS	TICK_ID		Formula
RTD	OPTION_TICK_HISTORY_TWS	ID		PK, IDENTITY

## rtd.OptionsTWS

The table contains the last values of option data from InteractiveBrokers Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
Req	=S tik!'id[TickId]?req?[Code]'	Formula
TickId		Formula
Code		PK
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Last	=S tiklid[TickId]?last	
LastSize	=S tiklid[TickId]?lastSize	
Bid	=S tiklid[TickId]?bid	
Ask	=S tiklid[TickId]?ask	
BidSize	=S tiklid[TickId]?bidSize	
AskSize	=S tiklid[TickId]?askSize	
High	=S tiklid[TickId]?high	
Low	=S tiklid[TickId]?low	
Close	=S tiklid[TickId]?close	
Volume	=S tiklid[TickId]?volume	
UnderlyingPrice	=S tiklid[TickId]?modelUndPrice	
ModelPrice	=S tiklid[TickId]?modelPrice	
ImpliedVol	=S tiklid[TickId]?modelVolatility	
BidImpliedVol	=S tiklid[TickId]?bidImpliedVol	
AskImpliedVol	=S tiklid[TickId]?askImpliedVol	
LastImpliedVol	=S tiklid[TickId]?lastImpliedVol	
BidDelta	=S tiklid[TickId]?bidDelta	
AskDelta	=S tiklid[TickId]?askDelta	
LastDelta	=S tiklid[TickId]?lastDelta	
Delta	=S tiklid[TickId]?modelDelta	
Gamma	=S tiklid[TickId]?modelGamma	
Theta	=S tiklid[TickId]?modelTheta	
Vega	=S tiklid[TickId]?modelVega	
pvDividend	=S tiklid[TickId]?pvDividend	
LastUpdateTimeStamp		

## rtd.OptionDayHistoryTWS

The table contains day history of option data from InteractiveBrokers Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
Req	=S tik!'id[TickId]?req?[Code]'	Formula
TickId		Formula
Code		PK
Date	=Date()	PK
Time	=Time()	
Last	=S tiklid[TickId]?last	
LastSize	=S tiklid[TickId]?lastSize	
Bid	=S tiklid[TickId]?bid	
Ask	=S tiklid[TickId]?ask	
BidSize	=S tiklid[TickId]?bidSize	
AskSize	=S tiklid[TickId]?askSize	
High	=S tiklid[TickId]?high	
Low	=S tiklid[TickId]?low	
Close	=S tiklid[TickId]?close	
Volume	=S tiklid[TickId]?volume	
UnderlyingPrice	=S tiklid[TickId]?modelUndPrice	
ModelPrice	=S tiklid[TickId]?modelPrice	
ImpliedVol	=S tiklid[TickId]?modelVolatility	
BidImpliedVol	=S tiklid[TickId]?bidImpliedVol	
AskImpliedVol	=S tiklid[TickId]?askImpliedVol	
LastImpliedVol	=S tiklid[TickId]?lastImpliedVol	
BidDelta	=S tiklid[TickId]?bidDelta	
AskDelta	=S tiklid[TickId]?askDelta	

LastDelta	=S tiklid[TickId]?lastDelta	
Delta	=S tiklid[TickId]?modelDelta	
Gamma	=S tiklid[TickId]?modelGamma	
Theta	=S tiklid[TickId]?modelTheta	
Vega	=S tiklid[TickId]?modelVega	
pvDividend	=S tiklid[TickId]?pvDividend	
LastUpdateTimeStamp		

## rtd.OptionTickHistoryTWS

The table contains tick history of option data from InteractiveBrokers Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
Req	=S tik!id[TickId]?req?[Code]'	Formula
TickId		Formula
ID		PK, IDENTITY
Code		
DateTime	=DateTime()	
Date	=Date()	
Time	=Time()	
Last	=S tiklid[TickId]?last	
LastSize	=S tiklid[TickId]?lastSize	
Bid	=S tiklid[TickId]?bid	
Ask	=S tiklid[TickId]?ask	
BidSize	=S tiklid[TickId]?bidSize	
AskSize	=S tiklid[TickId]?askSize	
High	=S tiklid[TickId]?high	
Low	=S tiklid[TickId]?low	
Close	=S tiklid[TickId]?close	
Volume	=S tiklid[TickId]?volume	
UnderlyingPrice	=S tiklid[TickId]?modelUndPrice	
ModelPrice	=S tiklid[TickId]?modelPrice	
ImpliedVol	=S tiklid[TickId]?modelVolatility	
BidImpliedVol	=S tiklid[TickId]?bidImpliedVol	
AskImpliedVol	=S tiklid[TickId]?askImpliedVol	
LastImpliedVol	=S tiklid[TickId]?lastImpliedVol	
BidDelta	=S tiklid[TickId]?bidDelta	
AskDelta	=S tiklid[TickId]?askDelta	
LastDelta	=S tiklid[TickId]?lastDelta	
Delta	=S tiklid[TickId]?modelDelta	
Gamma	=S tiklid[TickId]?modelGamma	
Theta	=S tiklid[TickId]?modelTheta	
Vega	=S tiklid[TickId]?modelVega	
pvDividend	=S tiklid[TickId]?pvDividend	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.options\_tws

The table contains the last values of option data from InteractiveBrokers Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
REQ	=S tik!'id[TICK_ID]?req?[CODE]'	Formula
TICK_ID		Formula
CODE		PK
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
LAST	=S tik!id[TICK_ID]?last	
LAST_SIZE	=S tik!id[TICK_ID]?lastSize	
BID	=S tik!id[TICK_ID]?bid	
ASK	=S tik!id[TICK_ID]?ask	
BID_SIZE	=S tik!id[TICK_ID]?bidSize	
ASK_SIZE	=S tik!id[TICK_ID]?askSize	
HIGH	=S tik!id[TICK_ID]?high	
LOW	=S tik!id[TICK_ID]?low	
CLOSE	=S tik!id[TICK_ID]?close	
VOLUME	=S tik!id[TICK_ID]?volume	
UNDERLYING_PRICE	=S tik!id[TICK_ID]?modelUndPrice	
MODEL_PRICE	=S tik!id[TICK_ID]?modelPrice	
IMPLIED_VOL	=S tik!id[TICK_ID]?modelVolatility	
BID_IMPLIED_VOL	=S tik!id[TICK_ID]?bidImpliedVol	
ASK_IMPLIED_VOL	=S tik!id[TICK_ID]?askImpliedVol	
LAST_IMPLIED_VOL	=S tik!id[TICK_ID]?lastImpliedVol	
BID_DELTA	=S tik!id[TICK_ID]?bidDelta	
ASK_DELTA	=S tik!id[TICK_ID]?askDelta	
LAST_DELTA	=S tik!id[TICK_ID]?lastDelta	
DELTA	=S tik!id[TICK_ID]?modelDelta	
GAMMA	=S tik!id[TICK_ID]?modelGamma	
THETA	=S tik!id[TICK_ID]?modelTheta	
VEGA	=S tik!id[TICK_ID]?modelVega	
PV_DIVIDEND	=S tik!id[TICK_ID]?pvDividend	
LAST_UPDATE_TIMESTAMP		

### rtd.option\_day\_history\_tws

The table contains day history of option data from InteractiveBrokers Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
REQ	=S tik!'id[TICK_ID]?req?[CODE]'	Formula
TICK_ID		Formula
CODE		PK
DATE	=Date()	PK
TIME	=Time()	
LAST	=S tik!id[TICK_ID]?last	
LAST_SIZE	=S tik!id[TICK_ID]?lastSize	
BID	=S tik!id[TICK_ID]?bid	
ASK	=S tik!id[TICK_ID]?ask	
BID_SIZE	=S tik!id[TICK_ID]?bidSize	
ASK_SIZE	=S tik!id[TICK_ID]?askSize	
HIGH	=S tik!id[TICK_ID]?high	
LOW	=S tik!id[TICK_ID]?low	
CLOSE	=S tik!id[TICK_ID]?close	
VOLUME	=S tik!id[TICK_ID]?volume	
UNDERLYING_PRICE	=S tik!id[TICK_ID]?modelUndPrice	
MODEL_PRICE	=S tik!id[TICK_ID]?modelPrice	
IMPLIED_VOL	=S tik!id[TICK_ID]?modelVolatility	
BID_IMPLIED_VOL	=S tik!id[TICK_ID]?bidImpliedVol	
ASK_IMPLIED_VOL	=S tik!id[TICK_ID]?askImpliedVol	
LAST_IMPLIED_VOL	=S tik!id[TICK_ID]?lastImpliedVol	
BID_DELTA	=S tik!id[TICK_ID]?bidDelta	
ASK_DELTA	=S tik!id[TICK_ID]?askDelta	

LAST_DELTA	=S tiklid[TICK_ID]?lastDelta	
DELTA	=S tiklid[TICK_ID]?modelDelta	
GAMMA	=S tiklid[TICK_ID]?modelGamma	
THETA	=S tiklid[TICK_ID]?modelTheta	
VEGA	=S tiklid[TICK_ID]?modelVega	
PV_DIVIDEND	=S tiklid[TICK_ID]?pvDividend	
LAST_UPDATE_TIMESTAMP		

## rtd.option\_tick\_history\_tws

The table contains tick history of option data from InteractiveBrokers Trader Workstation (TWS).

COLUMN_NAME	RTD_FORMULA	COMMENT
REQ	=S tikl'id[TICK_ID]?req?[CODE]'	Formula
TICK_ID		Formula
ID		PK, IDENTITY
CODE		
DATETIME	=DateTime()	
DATE	=Date()	
TIME	=Time()	
LAST	=S tiklid[TICK_ID]?last	
LAST_SIZE	=S tiklid[TICK_ID]?lastSize	
BID	=S tiklid[TICK_ID]?bid	
ASK	=S tiklid[TICK_ID]?ask	
BID_SIZE	=S tiklid[TICK_ID]?bidSize	
ASK_SIZE	=S tiklid[TICK_ID]?askSize	
HIGH	=S tiklid[TICK_ID]?high	
LOW	=S tiklid[TICK_ID]?low	
CLOSE	=S tiklid[TICK_ID]?close	
VOLUME	=S tiklid[TICK_ID]?volume	
UNDERLYING_PRICE	=S tiklid[TICK_ID]?modelUndPrice	
MODEL_PRICE	=S tiklid[TICK_ID]?modelPrice	
IMPLIED_VOL	=S tiklid[TICK_ID]?modelVolatility	
BID_IMPLIED_VOL	=S tiklid[TICK_ID]?bidImpliedVol	
ASK_IMPLIED_VOL	=S tiklid[TICK_ID]?askImpliedVol	
LAST_IMPLIED_VOL	=S tiklid[TICK_ID]?lastImpliedVol	
BID_DELTA	=S tiklid[TICK_ID]?bidDelta	
ASK_DELTA	=S tiklid[TICK_ID]?askDelta	
LAST_DELTA	=S tiklid[TICK_ID]?lastDelta	
DELTA	=S tiklid[TICK_ID]?modelDelta	
GAMMA	=S tiklid[TICK_ID]?modelGamma	
THETA	=S tiklid[TICK_ID]?modelTheta	
VEGA	=S tiklid[TICK_ID]?modelVega	
PV_DIVIDEND	=S tiklid[TICK_ID]?pvDividend	



# Option Data from Yahoo! Finance

## Overview

The RTD database contains preconfigured tables for getting option data from Yahoo! Finance using [RealTimeToExcel](#).

These data are available and activated by default. Just edit required symbols in the OptionListYahoo table.

Yahoo! Finance data are delayed.

Use <http://finance.yahoo.com/> to find option tickers.

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	OptionListYahoo		
rtd	OptionsYahoo	SELECT Code FROM rtd.OptionListYahoo	
rtd	OptionDayHistoryYahoo	SELECT Code FROM rtd.OptionListYahoo	
rtd	OptionTickHistoryYahoo	SELECT Code FROM rtd.OptionListYahoo	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	options_yahoo	SELECT CODE FROM rtd.option_list_yahoo	
rtd	option_day_history_yahoo	SELECT CODE FROM rtd.option_list_yahoo	
rtd	option_list_yahoo		
rtd	option_tick_history_yahoo	SELECT CODE FROM rtd.option_list_yahoo	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	OPTION_LIST_YAHOO		
RTD	OPTIONS_YAHOO	SELECT CODE FROM RTD.OPTION_LIST_YAHOO	
RTD	OPTION_DAY_HISTORY_YAHOO	SELECT CODE FROM RTD.OPTION_LIST_YAHOO	
RTD	OPTION_TICK_HISTORY_YAHOO	SELECT CODE FROM RTD.OPTION_LIST_YAHOO	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.OptionListYahoo for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
.AAPL160115C100
.AAPL160115C200
AAPL160115P00100000
AAPL160115P00200000

rtd.option\_list\_yahoo for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
.AAPL160115C100
.AAPL160115C200
AAPL160115P00100000
AAPL160115P00200000

Task tables can contain option codes in thinkDesktop and Yahoo! Finance formats as shown above.

The result OptionCode column in data tables contains option codes in Yahoo! Finance format.

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	OptionsYahoo	Code		PK
rtd	OptionDayHistoryYahoo	DateTime	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"rtd_LastUpdate")	Formula
rtd	OptionDayHistoryYahoo	Code		PK
rtd	OptionDayHistoryYahoo	Date	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"rtd_LastUpdateDate")	PK
rtd	OptionTickHistoryYahoo	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	options_yahoo	CODE		PK
rtd	option_day_history_yahoo	DATETIME	=RTD("gartle.rtd",,"YahooFinanceOptions",[CODE],"rtd_LastUpdate")	Formula
rtd	option_day_history_yahoo	CODE		PK
rtd	option_day_history_yahoo	DATE	=RTD("gartle.rtd",,"YahooFinanceOptions",[CODE],"rtd_LastUpdateDate")	PK
rtd	option_tick_history_yahoo	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	OPTIONS_YAHOO	CODE		PK
RTD	OPTION_DAY_HISTORY_YAHOO	DATETIME	=RTD("gartle.rtd",,"YahooFinanceOptions",[CODE],"rtd_LastUpdate")	Formula
RTD	OPTION_DAY_HISTORY_YAHOO	CODE		PK
RTD	OPTION_DAY_HISTORY_YAHOO	DATE	=RTD("gartle.rtd",,"YahooFinanceOptions",[CODE],"rtd_LastUpdateDate")	PK
RTD	OPTION_TICK_HISTORY_YAHOO	ID		PK, IDENTITY

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.OptionsYahoo

The table contains the last values of option data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		PK
OptionCode	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Symbol")	
DateTime	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"rtd_LastUpdate")	
Date	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"rtd_LastUpdateDate")	
Time	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"rtd_LastUpdateTime")	
OptionSymbol	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Exp")	
Strike	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Strike")	
Type	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Type")	
Last	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Last")	
Change	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Change")	
PercentChange	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"ChangeInPercent")	
Mark	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Mark")	
Bid	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Bid")	
Ask	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Ask")	
Volume	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"OpenInt")	
ImpliedVol	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"ImpliedVol")	
LastUpdateTimeStamp		

### rtd.OptionDayHistoryYahoo

The table contains day history of option data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
DateTime	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"rtd_LastUpdate")	Formula
Code		PK
OptionCode	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"Symbol")	
Date	=RTD("gartle.rtd",,"YahooFinanceOptions",[Code],"rtd_LastUpdateDate")	PK

Time	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"rtd_LastUpdateTime")	
OptionSymbol	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Exp")	
Strike	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Strike")	
Type	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Type")	
Last	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Last")	
Change	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Change")	
PercentChange	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"ChangeInPercent")	
Mark	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Mark")	
Bid	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Bid")	
Ask	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Ask")	
Volume	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"OpenInt")	
ImpliedVol	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"ImpliedVol")	
LastUpdateTimeStamp		

## rtd.OptionTickHistoryYahoo

The table contains tick history of option data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Code		
OptionCode	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Symbol")	
DateTime	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"rtd_LastUpdate")	
Date	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"rtd_LastUpdateDate")	
Time	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"rtd_LastUpdateTime")	
OptionSymbol	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Exp")	
Strike	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Strike")	
Type	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Type")	
Last	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Last")	
Change	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Change")	
PercentChange	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"ChangeInPercent")	
Mark	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Mark")	
Bid	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Bid")	
Ask	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Ask")	
Volume	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"OpenInt")	
ImpliedVol	=RTD("gartle.rtd", "YahooFinanceOptions",[Code],"ImpliedVol")	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.options\_yahoo

The table contains the last values of option data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		PK
OPTION_CODE	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"OptionCode")	
SYMBOL	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Symbol")	
DATETIME	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"rtd_LastUpdate")	
DATE	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"rtd_LastUpdateDate")	
TIME	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"rtd_LastUpdateTime")	
OPTION_SYMBOL	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"OptionSymbol")	
EXP_DATE	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Exp")	
STRIKE	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Strike")	
TYPE	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Type")	
LAST	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Last")	
CHANGE	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"ChangeInPercent")	
MARK	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Mark")	
BID	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Bid")	
ASK	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Ask")	
VOLUME	=RTD("gartle.rtd", "YahooFinanceOptions",[CODE],"Volume")	

OPEN_INT	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"OpenInt")	
IMPLIED_VOL	=RTD("gartle.rtd","YahooFinanceOptions",[Code],"ImpliedVol")	
LAST_UPDATE_TIMESTAMP		

## rtd.option\_day\_history\_yahoo

The table contains day history of option data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
DATETIME	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"rtd_LastUpdate")	Formula
CODE		PK
OPTION_CODE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"OptionCode")	
SYMBOL	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Symbol")	
DATE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"rtd_LastUpdateDate")	PK
TIME	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"rtd_LastUpdateTime")	
OPTION_SYMBOL	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"OptionSymbol")	
EXP_DATE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Exp")	
STRIKE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Strike")	
TYPE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Type")	
LAST	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Last")	
CHANGE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"ChangeInPercent")	
MARK	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Mark")	
BID	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Bid")	
ASK	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Ask")	
VOLUME	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Volume")	
OPEN_INT	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"OpenInt")	
IMPLIED_VOL	=RTD("gartle.rtd","YahooFinanceOptions",[Code],"ImpliedVol")	
LAST_UPDATE_TIMESTAMP		

## rtd.option\_tick\_history\_yahoo

The table contains tick history of option data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
CODE		
OPTION_CODE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"OptionCode")	
SYMBOL	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Symbol")	
DATETIME	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"rtd_LastUpdate")	
DATE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"rtd_LastUpdateDate")	
TIME	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"rtd_LastUpdateTime")	
OPTION_SYMBOL	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"OptionSymbol")	
EXP_DATE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Exp")	
STRIKE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Strike")	
TYPE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Type")	
LAST	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Last")	
CHANGE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"ChangeInPercent")	
MARK	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Mark")	
BID	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Bid")	
ASK	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Ask")	
VOLUME	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"Volume")	
OPEN_INT	=RTD("gartle.rtd","YahooFinanceOptions",[CODE],"OpenInt")	
IMPLIED_VOL	=RTD("gartle.rtd","YahooFinanceOptions",[Code],"ImpliedVol")	

# Option Data from Google Finance

## Overview

The RTD database contains preconfigured tables for getting option data from Google Finance using [RealTimeToExcel](#).

These data are available and activated by default. Just edit required symbols in the OptionListGoogle table.

Google Finance data are delayed.

Use <https://www.google.com/finance> to find option tickers.

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	OptionListGoogle		
rtd	OptionsGoogle	SELECT Code FROM rtd.OptionListGoogle	
rtd	OptionDayHistoryGoogle	SELECT Code FROM rtd.OptionListGoogle	
rtd	OptionTickHistoryGoogle	SELECT Code FROM rtd.OptionListGoogle	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	option_list_google		
rtd	options_google	SELECT CODE FROM rtd.option_list_google	
rtd	option_day_history_google	SELECT CODE FROM rtd.option_list_google	
rtd	option_tick_history_google	SELECT CODE FROM rtd.option_list_google	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	OPTION_LIST_GOOGLE		
RTD	OPTIONS_GOOGLE	SELECT CODE FROM RTD.OPTION_LIST_GOOGLE	
RTD	OPTION_DAY_HISTORY_GOOGLE	SELECT CODE FROM RTD.OPTION_LIST_GOOGLE	
RTD	OPTION_TICK_HISTORY_GOOGLE	SELECT CODE FROM RTD.OPTION_LIST_GOOGLE	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.OptionListGoogle for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
.AAPL160115C100
.AAPL160115C200
AAPL160115P00100000
AAPL160115P00200000

rtd.option\_list\_google for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
.AAPL160115C100
.AAPL160115C200
AAPL160115P00100000
AAPL160115P00200000

Task tables can contain option codes in thinkDesktop and Google Finance formats as shown above.

The result OptionCode column in data tables contains option codes in Google Finance format.

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	OptionsGoogle	Code		PK
rtd	OptionDayHistoryGoogle	DateTime	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"rtd_LastUpdate")	Formula
rtd	OptionDayHistoryGoogle	Code		PK
rtd	OptionDayHistoryGoogle	Date	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"rtd_LastUpdateDate")	PK
rtd	OptionTickHistoryGoogle	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	options_google	CODE		PK
rtd	option_day_history_google	DATETIME	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdate")	Formula
rtd	option_day_history_google	CODE		PK
rtd	option_day_history_google	DATE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdateDate")	PK
rtd	option_tick_history_google	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	OPTIONS_GOOGLE	CODE		PK
RTD	OPTION_DAY_HISTORY_GOOGLE	DATETIME	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdate")	Formula
RTD	OPTION_DAY_HISTORY_GOOGLE	CODE		PK
RTD	OPTION_DAY_HISTORY_GOOGLE	DATE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdateDate")	PK
RTD	OPTION_TICK_HISTORY_GOOGLE	ID		PK, IDENTITY

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.OptionsGoogle

The table contains the last values of option data from Google Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		PK
OptionCode	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Symbol")	
DateTime	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"rtd_LastUpdate")	
Date	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"rtd_LastUpdateDate")	
Time	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"rtd_LastUpdateTime")	
OptionSymbol	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Exp")	
Strike	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Strike")	
Type	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Type")	
Last	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Last")	
Change	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Change")	
PercentChange	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"PercentChange")	
Mark	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Mark")	
Bid	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Bid")	
Ask	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Ask")	
Volume	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"OpenInt")	
LastUpdateTimeStamp		

### rtd.OptionDayHistoryGoogle

The table contains day history of option data from Google Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
DateTime	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"rtd_LastUpdate")	Formula
Code		PK
OptionCode	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"Symbol")	
Date	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"rtd_LastUpdateDate")	PK
Time	=RTD("gartle.rtd",,"GoogleFinanceOptions",[Code],"rtd_LastUpdateTime")	

OptionSymbol	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Exp")	
Strike	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Strike")	
Type	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Type")	
Last	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Last")	
Change	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Change")	
PercentChange	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"PercentChange")	
Mark	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Mark")	
Bid	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Bid")	
Ask	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Ask")	
Volume	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"OpenInt")	
LastUpdateTimeStamp		

## rtd.OptionTickHistoryGoogle

The table contains tick history of option data from Google Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Code		
OptionCode	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Symbol")	
DateTime	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"rtd_LastUpdate")	
Date	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"rtd_LastUpdateDate")	
Time	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"rtd_LastUpdateTime")	
OptionSymbol	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Exp")	
Strike	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Strike")	
Type	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Type")	
Last	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Last")	
Change	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Change")	
PercentChange	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"PercentChange")	
Mark	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Mark")	
Bid	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Bid")	
Ask	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Ask")	
Volume	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd", "GoogleFinanceOptions",[Code],"OpenInt")	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.options\_google

The table contains the last values of option data from Google Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		PK
OPTION_CODE	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"OptionCode")	
SYMBOL	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Symbol")	
DATETIME	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"rtd_LastUpdate")	
DATE	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"rtd_LastUpdateDate")	
TIME	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"rtd_LastUpdateTime")	
OPTION_SYMBOL	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"OptionSymbol")	
EXP_DATE	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Exp")	
STRIKE	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Strike")	
TYPE	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Type")	
LAST	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Last")	
CHANGE	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"PercentChange")	
MARK	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Mark")	
BID	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Bid")	
ASK	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Ask")	
VOLUME	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"Volume")	
OPEN_INT	=RTD("gartle.rtd", "GoogleFinanceOptions",[CODE],"OpenInt")	
LAST_UPDATE_TIMESTAMP		

## rtd.option\_day\_history\_google

The table contains day history of option data from Google Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
DATETIME	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdate")	Formula
CODE		PK
OPTION_CODE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"OptionCode")	
SYMBOL	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Symbol")	
DATE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdateDate")	PK
TIME	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdateTime")	
OPTION_SYMBOL	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"OptionSymbol")	
EXP_DATE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Exp")	
STRIKE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Strike")	
TYPE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Type")	
LAST	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Last")	
CHANGE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"PercentChange")	
MARK	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Mark")	
BID	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Bid")	
ASK	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Ask")	
VOLUME	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Volume")	
OPEN_INT	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"OpenInt")	
LAST_UPDATE_TIMESTAMP		

## rtd.option\_tick\_history\_google

The table contains tick history of option data from Google Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
CODE		
OPTION_CODE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"OptionCode")	
SYMBOL	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Symbol")	
DATETIME	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdate")	
DATE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdateDate")	
TIME	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"rtd_LastUpdateTime")	
OPTION_SYMBOL	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"OptionSymbol")	
EXP_DATE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Exp")	
STRIKE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Strike")	
TYPE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Type")	
LAST	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Last")	
CHANGE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"PercentChange")	
MARK	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Mark")	
BID	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Bid")	
ASK	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Ask")	
VOLUME	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"Volume")	
OPEN_INT	=RTD("gartle.rtd",,"GoogleFinanceOptions",[CODE],"OpenInt")	



## Option Data from MSN Money

### Overview

The RTD database contains preconfigured tables for getting option data from MSN Money using [RealTimeToExcel](#).

These data are available and activated by default. Just edit required symbols in the OptionListMsnMoney table.

MSN Money data are delayed.

Use <http://www.msn.com/en-us/money> to find option tickers.

### Real-Time Data Tables

#### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	OptionListMsnMoney		
rtd	OptionsMsnMoney	SELECT Code FROM rtd.OptionListMsnMoney	
rtd	OptionDayHistoryMsnMoney	SELECT Code FROM rtd.OptionListMsnMoney	
rtd	OptionTickHistoryMsnMoney	SELECT Code FROM rtd.OptionListMsnMoney	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	option_list_msnmoney		
rtd	options_msnmoney	SELECT CODE FROM rtd.option_list_msnmoney	
rtd	option_day_history_msnmoney	SELECT CODE FROM rtd.option_list_msnmoney	
rtd	option_tick_history_msnmoney	SELECT CODE FROM rtd.option_list_msnmoney	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	OPTION_LIST_MSNMONEY		
RTD	OPTIONS_MSNMONEY	SELECT CODE FROM RTD.OPTION_LIST_MSNMONEY	
RTD	OPTION_DAY_HISTORY_MSNMONEY	SELECT CODE FROM RTD.OPTION_LIST_MSNMONEY	
RTD	OPTION_TICK_HISTORY_MSNMONEY	SELECT CODE FROM RTD.OPTION_LIST_MSNMONEY	1

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.OptionListMsnMoney for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
.AAPL160115C100
.AAPL160115C200
AAPL160115P00100000
AAPL160115P00200000

rtd.option\_list\_msnmoney for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
.AAPL160115C100
.AAPL160115C200
AAPL160115P00100000
AAPL160115P00200000

Task tables can contain option codes in thinkDesktop and MSN Money formats as shown above.

The result OptionCode column in data tables contains option codes in MSN Money format.

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	OptionsMsnMoney	Code		PK
rtd	OptionDayHistoryMsnMoney	DateTime	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"rtd_LastUpdate")	Formula
rtd	OptionDayHistoryMsnMoney	Code		PK
rtd	OptionDayHistoryMsnMoney	Date	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"rtd_LastUpdateDate")	PK
rtd	OptionTickHistoryMsnMoney	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	options_msnmoney	CODE		PK
rtd	option_day_history_msnmoney	DATETIME	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdate")	Formula
rtd	option_day_history_msnmoney	CODE		PK
rtd	option_day_history_msnmoney	DATE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdateDate")	PK
rtd	option_tick_history_msnmoney	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	OPTIONS_MSNMONEY	CODE		PK
RTD	OPTION_DAY_HISTORY_MSNMONEY	DATETIME	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdate")	Formula
RTD	OPTION_DAY_HISTORY_MSNMONEY	CODE		PK
RTD	OPTION_DAY_HISTORY_MSNMONEY	DATE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdateDate")	PK
RTD	OPTION_TICK_HISTORY_MSNMONEY	ID		PK, IDENTITY

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.OptionsMsnMoney

The table contains the last values of option data from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
Code		PK
OptionCode	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Symbol")	
DateTime	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"rtd_LastUpdate")	
Date	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"rtd_LastUpdateDate")	
Time	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"rtd_LastUpdateTime")	
OptionSymbol	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Exp")	
Strike	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Strike")	
Type	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Type")	
Last	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Last")	
Change	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Change")	
PercentChange	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"PercentChange")	
Mark	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Mark")	
Bid	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Bid")	
Ask	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Ask")	
Volume	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"OpenInt")	
LastUpdateTimeStamp		

### rtd.OptionDayHistoryMsnMoney

The table contains day history of option data from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
DateTime	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[Code],"rtd_LastUpdate")	Formula

Code		PK
OptionCode	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "OptionCode")	
Symbol	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Symbol")	
Date	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "rtd_LastUpdateDate")	PK
Time	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "rtd_LastUpdateTime")	
OptionSymbol	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "OptionSymbol")	
ExpDate	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Exp")	
Strike	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Strike")	
Type	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Type")	
Last	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Last")	
Change	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Change")	
PercentChange	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "PercentChange")	
Mark	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Mark")	
Bid	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Bid")	
Ask	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Ask")	
Volume	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Volume")	
OpenInt	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "OpenInt")	
LastUpdateTimeStamp		

## rtd.OptionTickHistoryMsnMoney

The table contains tick history of option data from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Code		
OptionCode	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "OptionCode")	
Symbol	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Symbol")	
DateTime	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "rtd_LastUpdate")	
Date	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "rtd_LastUpdateDate")	
Time	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "rtd_LastUpdateTime")	
OptionSymbol	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "OptionSymbol")	
ExpDate	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Exp")	
Strike	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Strike")	
Type	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Type")	
Last	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Last")	
Change	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Change")	
PercentChange	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "PercentChange")	
Mark	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Mark")	
Bid	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Bid")	
Ask	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Ask")	
Volume	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "Volume")	
OpenInt	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [Code], "OpenInt")	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.options\_msnmoney

The table contains the last values of option data from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
CODE		PK
OPTION_CODE	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "OptionCode")	
SYMBOL	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "Symbol")	
DATETIME	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "rtd_LastUpdate")	
DATE	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "rtd_LastUpdateDate")	
TIME	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "rtd_LastUpdateTime")	
OPTION_SYMBOL	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "OptionSymbol")	
EXP_DATE	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "Exp")	
STRIKE	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "Strike")	
TYPE	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "Type")	
LAST	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "Last")	
CHANGE	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "Change")	
PERCENT_CHANGE	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "PercentChange")	
MARK	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "Mark")	
BID	=RTD("gartle.rtd", "MsnMoneyFinanceOptions", [CODE], "Bid")	

ASK	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Ask")	
VOLUME	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Volume")	
OPEN_INT	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"OpenInt")	
LAST_UPDATE_TIMESTAMP		

## rtd.option\_day\_history\_msnmoney

The table contains day history of option data from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
DATETIME	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdate")	Formula
CODE		PK
OPTION_CODE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"OptionCode")	
SYMBOL	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Symbol")	
DATE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdateDate")	PK
TIME	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdateTime")	
OPTION_SYMBOL	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"OptionSymbol")	
EXP_DATE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Exp")	
STRIKE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Strike")	
TYPE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Type")	
LAST	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Last")	
CHANGE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"PercentChange")	
MARK	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Mark")	
BID	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Bid")	
ASK	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Ask")	
VOLUME	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Volume")	
OPEN_INT	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"OpenInt")	
LAST_UPDATE_TIMESTAMP		

## rtd.option\_tick\_history\_msnmoney

The table contains tick history of option data from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
CODE		
OPTION_CODE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"OptionCode")	
SYMBOL	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Symbol")	
DATETIME	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdate")	
DATE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdateDate")	
TIME	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"rtd_LastUpdateTime")	
OPTION_SYMBOL	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"OptionSymbol")	
EXP_DATE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Exp")	
STRIKE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Strike")	
TYPE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Type")	
LAST	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Last")	
CHANGE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"PercentChange")	
MARK	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Mark")	
BID	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Bid")	
ASK	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Ask")	
VOLUME	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"Volume")	
OPEN_INT	=RTD("gartle.rtd",,"MsnMoneyFinanceOptions",[CODE],"OpenInt")	

# Stock Data from Yahoo! Finance

## Overview

The RTD database contains preconfigured tables for getting static stock data from Yahoo! Finance using [RealTimeToExcel](#).

These data are available and activated by default. Just edit required symbols in the QuoteListStocks table.

Use <http://finance.yahoo.com/> to find tickers.

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	StocksYahoo	SELECT Code AS Symbol FROM rtd.QuoteListStocks	

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	stocks_yahoo	SELECT CODE AS SYMBOL FROM rtd.quote_list_stocks	

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	STOCKS_YAHOO	SELECT CODE AS SYMBOL FROM RTD.QUOTE_LIST_STOCKS	

\* Click on the table name to go to the table description.

### Task Table Examples

rtd.QuoteListStocks for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
AAPL
GOOG

quote\_list\_stocks for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
AAPL
GOOG

Use <http://finance.yahoo.com/> to find tickers.

### Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	StocksYahoo	Symbol		PK

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	stocks_yahoo	SYMBOL		PK

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	STOCKS_YAHOO	SYMBOL		PK

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.StocksYahoo

The table contains stock data from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol		PK
CompanyName	=RTD("gartle.rtd", "YahooFinanceStocks",[Symbol],"CompanyName")	
Sector	=RTD("gartle.rtd", "YahooFinanceStocks",[Symbol],"Sector")	
Industry	=RTD("gartle.rtd", "YahooFinanceStocks",[Symbol],"Industry")	
FullTimeEmployees	=RTD("gartle.rtd", "YahooFinanceStocks",[Symbol],"FullTimeEmployees")	
TradeStart	=RTD("gartle.rtd", "YahooFinanceStocks",[Symbol],"Start")	
TradeEnd	=RTD("gartle.rtd", "YahooFinanceStocks",[Symbol],"End")	
LastUpdateTimeStamp		

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

The table contains stock data from Yahoo! Finance.

### rtd.stocks\_yahoo

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL		PK
COMPANY_NAME	=RTD("gartle.rtd", "YahooFinanceStocks",[SYMBOL],"CompanyName")	
SECTOR	=RTD("gartle.rtd", "YahooFinanceStocks",[SYMBOL],"Sector")	
INDUSTRY	=RTD("gartle.rtd", "YahooFinanceStocks",[SYMBOL],"Industry")	
FULLTIME_EMPLOYEES	=RTD("gartle.rtd", "YahooFinanceStocks",[SYMBOL],"FullTimeEmployees")	
TRADE_START	=RTD("gartle.rtd", "YahooFinanceStocks",[SYMBOL],"Start")	
TRADE_END	=RTD("gartle.rtd", "YahooFinanceStocks",[SYMBOL],"End")	
LAST_UPDATE_TIMESTAMP		

# Currencies from MSN Money

## Overview

The RTD database contains preconfigured tables for getting currency rates from MSN Money using [RealTimeToExcel](#).

These data are available and activated by default. Just edit required symbols in the CurrenciesListMsnMoney table.

MSN Money data are delayed.

Use <http://www.msn.com/en-us/money> to find tickers.

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	CurrenciesListMsnMoney		
rtd	CurrenciesMsnMoney	SELECT Code AS Symbol FROM rtd.CurrenciesListMsnMoney	
rtd	CurrenciesDayHistoryMsnMoney	SELECT Code AS Symbol FROM rtd.CurrenciesListMsnMoney	
rtd	CurrenciesTimeHistoryMsnMoney	SELECT Code AS Symbol FROM rtd.CurrenciesListMsnMoney	
rtd	CurrenciesTickHistoryMsnMoney	SELECT Code AS Symbol FROM rtd.CurrenciesListMsnMoney	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	currencies_list_msnmoney		
rtd	currencies_msnmoney	SELECT CODE AS SYMBOL FROM rtd.currencies_list_msnmoney	
rtd	currencies_day_history_msnmoney	SELECT CODE AS SYMBOL FROM rtd.currencies_list_msnmoney	
rtd	currencies_time_history_msnmoney	SELECT CODE AS SYMBOL FROM rtd.currencies_list_msnmoney	
rtd	currencies_tick_history_msnmoney	SELECT CODE AS SYMBOL FROM rtd.currencies_list_msnmoney	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	CURRENCIES_LIST_MSNMONEY		
RTD	CURRENCIES_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_MSNMONEY	
RTD	CURRENCIES_DAY_HISTORY_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_MSNMONEY	
RTD	CURRENCIES_TIME_HISTORY_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_MSNMONEY	
RTD	CURRENCIES_TICK_HISTORY_MSNMONEY	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_MSNMONEY	1

\* Click on the table name to go to the table description.

## Task Table Examples

rtd.CurrenciesListMsnMoney for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
EURUSD
GBPUSD
USDCAD
AUDUSD
NZDUSD
USDJPY
USDCHF
USDSEK

rtd.currencies\_list\_msnmoney for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
EURUSD

GBPUSD
USDCAD
AUDUSD
NZDUSD
USDJPY
USDCHF
USDSEK

Use <http://www.msn.com/en-us/money> to find tickers.

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	CurrenciesMsnMoney	Symbol	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Symbol")	PK
rtd	CurrenciesDayHistoryMsnMoney	Symbol	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Symbol")	PK
rtd	CurrenciesDayHistoryMsnMoney	Date	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdateDate")	PK
rtd	CurrenciesTimeHistoryMsnMoney	Symbol	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Symbol")	PK
rtd	CurrenciesTimeHistoryMsnMoney	DateTime	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdate")	PK
rtd	CurrenciesTickHistoryMsnMoney	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	currencies_msnmoney	SYMBOL	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "Symbol")	PK
rtd	currencies_day_history_msnmoney	SYMBOL	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "Symbol")	PK
rtd	currencies_day_history_msnmoney	DATE	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "rtd_LastUpdateDate")	PK
rtd	currencies_time_history_msnmoney	SYMBOL	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "Symbol")	PK
rtd	currencies_time_history_msnmoney	DATETIME	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "rtd_LastUpdate")	PK
rtd	currencies_tick_history_msnmoney	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	CURRENCIES_MSNMONEY	SYMBOL	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "Symbol")	PK
RTD	CURRENCIES_DAY_HISTORY_MSNMONEY	SYMBOL	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "Symbol")	PK
RTD	CURRENCIES_DAY_HISTORY_MSNMONEY	DATE	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "rtd_LastUpdateDate")	PK
RTD	CURRENCIES_TICK_HISTORY_MSNMONEY	ID		PK, IDENTITY
RTD	CURRENCIES_TIME_HISTORY_MSNMONEY	SYMBOL	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "Symbol")	PK
RTD	CURRENCIES_TIME_HISTORY_MSNMONEY	DATETIME	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "rtd_LastUpdate")	PK

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.CurrenciesMsnMoney

The table contains the last data values of currency rates from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Symbol")	PK
DateTime	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdate")	
Date	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdateDate")	
Time	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdateTime")	
Last	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "PercentChange")	
Open	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Open")	



High	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "High")	
Low	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Low")	
LastUpdateTimeStamp		

## rtd.CurrenciesDayHistoryMsnMoney

The table contains day history of currency rates from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Symbol")	PK
Date	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdateDate")	PK
Time	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdateTime")	
Last	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "PercentChange")	
Open	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Open")	
High	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "High")	
Low	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Low")	
LastUpdateTimeStamp		

## rtd.CurrenciesTimeHistoryMsnMoney

The table contains time history of currency rates from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Symbol")	PK
DateTime	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdate")	PK
Date	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdateDate")	
Time	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdateTime")	
Last	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "PercentChange")	
Open	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Open")	
High	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "High")	
Low	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Low")	
LastUpdateTimeStamp		

## rtd.CurrenciesTickHistoryMsnMoney

The table contains tick history of currency rates from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Symbol	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Symbol")	
DateTime	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdate")	
Date	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdateDate")	
Time	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "rtd_LastUpdateTime")	
Last	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "PercentChange")	
Open	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Open")	
High	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "High")	
Low	=RTD("gartle.rtd", "MsnMoneyCurrencies", [Symbol], "Low")	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.currencies\_msnmoney

The table contains the last data values of currency rates from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "Symbol")	PK
DATETIME	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "rtd_LastUpdate")	
DATE	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "rtd_LastUpdateDate")	
TIME	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "rtd_LastUpdateTime")	
LAST	=RTD("gartle.rtd", "MsnMoneyCurrencies", [SYMBOL], "Last")	

CHANGE	=RTD("gartle.rtd","MsnMoneyCurrencies",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd","MsnMoneyCurrencies",[SYMBOL],"PercentChange")	
OPEN	=RTD("gartle.rtd","MsnMoneyCurrencies",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd","MsnMoneyCurrencies",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd","MsnMoneyCurrencies",[SYMBOL],"Low")	
LAST_UPDATE_TIMESTAMP		

## rtd.currencies\_day\_history\_msnmoney

The table contains day history of currency rates from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Symbol")	PK
DATE	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"rtd_LastUpdateDate")	PK
TIME	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"rtd_LastUpdateTime")	
LAST	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"PercentChange")	
OPEN	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Low")	
LAST_UPDATE_TIMESTAMP		

## rtd.currencies\_time\_history\_msnmoney

The table contains time history of currency rates from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Symbol")	PK
DATETIME	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"rtd_LastUpdate")	PK
DATE	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"rtd_LastUpdateDate")	
TIME	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"rtd_LastUpdateTime")	
LAST	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"PercentChange")	
OPEN	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Low")	
LAST_UPDATE_TIMESTAMP		

## rtd.currencies\_tick\_history\_msnmoney

The table contains tick history of currency rates from MSN Money.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
SYMBOL	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Symbol")	
DATETIME	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"rtd_LastUpdate")	
DATE	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"rtd_LastUpdateDate")	
TIME	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"rtd_LastUpdateTime")	
LAST	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"PercentChange")	
OPEN	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd",,"MsnMoneyCurrencies",[SYMBOL],"Low")	

# Currencies from Yahoo! Finance

## Overview

The RTD database contains preconfigured tables for getting currency rates from Yahoo! Finance using [RealTimeToExcel](#).

These data are available and activated by default. Just edit required symbols in the CurrenciesListYahoo table.

Yahoo! Finance data are delayed.

Use <http://finance.yahoo.com/> to find tickers.

## Real-Time Data Tables

### Table Configurations

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	CurrenciesListYahoo		
rtd	CurrenciesYahoo	SELECT Code AS Symbol FROM rtd.CurrenciesListYahoo	
rtd	CurrenciesDayHistoryYahoo	SELECT Code AS Symbol FROM rtd.CurrenciesListYahoo	
rtd	CurrenciesTimeHistoryYahoo	SELECT Code AS Symbol FROM rtd.CurrenciesListYahoo	
rtd	CurrenciesTickHistoryYahoo	SELECT Code AS Symbol FROM rtd.CurrenciesListYahoo	1

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
rtd	currencies_list_yahoo		
rtd	currencies_yahoo	SELECT CODE AS SYMBOL FROM rtd.currencies_list_yahoo	
rtd	currencies_day_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.currencies_list_yahoo	
rtd	currencies_time_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.currencies_list_yahoo	
rtd	currencies_tick_history_yahoo	SELECT CODE AS SYMBOL FROM rtd.currencies_list_yahoo	1

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	LOAD_CODE	IS_HISTORY
RTD	CURRENCIES_LIST_YAHOO		
RTD	CURRENCIES_YAHOO	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_YAHOO	
RTD	CURRENCIES_DAY_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_YAHOO	
RTD	CURRENCIES_TIME_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_YAHOO	
RTD	CURRENCIES_TICK_HISTORY_YAHOO	SELECT CODE AS SYMBOL FROM RTD.CURRENCIES_LIST_YAHOO	1

\* Click on the table name to go to the table description.

## Task Table Examples

rtd.CurrenciesListYahoo for Microsoft SQL Server and Microsoft SQL Server Compact:

Code
EURUSD
GBPUSD
USDCAD
AUDUSD
NZDUSD
USDJPY
USDCHF
USDSEK

rtd.currencies\_list\_yahoo for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL:

CODE
EURUSD
GBPUSD
USDCAD
AUDUSD

NZDUSD
USDJPY
USDCHF
USDSEK

Use <http://finance.yahoo.com/> to find tickers.

## Primary Key Columns

Microsoft SQL Server and Microsoft SQL Server Compact:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	CurrenciesYahoo	Symbol	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Symbol")	PK
rtd	CurrenciesDayHistoryYahoo	Symbol	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Symbol")	PK
rtd	CurrenciesDayHistoryYahoo	LastTradeDate	=RTD("gartle.rtd", "YahooFinanceCurrencies", [Symbol],"LastTradeDate")	PK
rtd	CurrenciesTimeHistoryYahoo	Symbol	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Symbol")	PK
rtd	CurrenciesTimeHistoryYahoo	LastTradeDateTime	=RTD("gartle.rtd", "YahooFinanceCurrencies", [Symbol],"LastTradeDateTime")	PK
rtd	CurrenciesTickHistoryYahoo	ID		PK, IDENTITY

MySQL, MariaDB, and PostgreSQL:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
rtd	currencies_yahoo	SYMBOL	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Symbol")	PK
rtd	currencies_day_history_yahoo	SYMBOL	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Symbol")	PK
rtd	currencies_day_history_yahoo	LAST_TRADE_DATE	=RTD("gartle.rtd", "YahooFinanceCurrencies", [SYMBOL],"LastTradeDate")	PK
rtd	currencies_time_history_yahoo	SYMBOL	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Symbol")	PK
rtd	currencies_time_history_yahoo	LAST_TRADE_DATETIME	=RTD("gartle.rtd", "YahooFinanceCurrencies", [SYMBOL],"LastTradeDateTime")	PK
rtd	currencies_tick_history_yahoo	ID		PK, IDENTITY

Oracle Database, IBM DB2, and Nuodb:

TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	RTD_FORMULA	COMMENT
RTD	CURRENCIES_YAHOO	SYMBOL	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Symbol")	PK
RTD	CURRENCIES_DAY_HISTORY_YAHOO	SYMBOL	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Symbol")	PK
RTD	CURRENCIES_DAY_HISTORY_YAHOO	LAST_TRADE_DATE	=RTD("gartle.rtd", "YahooFinanceCurrencies", [SYMBOL],"LastTradeDate")	PK
RTD	CURRENCIES_TICK_HISTORY_YAHOO	ID		PK, IDENTITY
RTD	CURRENCIES_TIME_HISTORY_YAHOO	SYMBOL	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Symbol")	PK
RTD	CURRENCIES_TIME_HISTORY_YAHOO	LAST_TRADE_DATETIME	=RTD("gartle.rtd", "YahooFinanceCurrencies", [SYMBOL],"LastTradeDateTime")	PK

## Real-Time Formulas for Microsoft SQL Server and Microsoft SQL Server Compact

### rtd.CurrenciesYahoo

The table contains the last data values of currency rates from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Symbol")	PK
LastTradeDateTime	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeDateTime")	
LastTradeDate	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Last")	
Change	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Open")	
High	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"High")	
Low	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Low")	
LastUpdateTimeStamp		

### rtd.CurrenciesDayHistoryYahoo

The table contains day history of currency rates from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Symbol")	PK
LastTradeDate	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeDate")	PK
LastTradeTime	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Last")	
Change	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Open")	
High	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"High")	
Low	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Low")	
LastUpdateTimeStamp		

## rtd.CurrenciesTimeHistoryYahoo

The table contains time history of currency rates from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
Symbol	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Symbol")	PK
LastTradeDateTime	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeDateTime")	PK
LastTradeDate	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Last")	
Change	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Open")	
High	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"High")	
Low	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Low")	
LastUpdateTimeStamp		

## rtd.CurrenciesTickHistoryYahoo

The table contains tick history of currency rates from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
Symbol	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Symbol")	
LastTradeDateTime	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeDateTime")	
LastTradeDate	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Last")	
Change	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Open")	
High	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"High")	
Low	=RTD("gartle.rtd", "YahooFinanceCurrencies",[Symbol],"Low")	

## Real-Time Formulas for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### rtd.currencies\_yahoo

The table contains the last data values of currency rates from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Symbol")	PK
LAST_TRADE_DATETIME	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"LastTradeDateTime")	
LAST_TRADE_DATE	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"LastTradeDate")	
LAST_TRADE_TIME	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"LastTradeTime")	
LAST	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"PercentChange")	
OPEN	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd", "YahooFinanceCurrencies",[SYMBOL],"Low")	
LAST_UPDATE_TIMESTAMP		

## rtd.currencies\_day\_history\_yahoo

The table contains day history of currency rates from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Symbol")	PK
LAST_TRADE_DATE	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"LastTradeDate")	PK
LAST_TRADE_TIME	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"LastTradeTime")	
LAST	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"PercentChange")	
OPEN	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Low")	
LAST_UPDATE_TIMESTAMP		

## rtd.currencies\_time\_history\_yahoo

The table contains time history of currency rates from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
SYMBOL	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Symbol")	PK
LAST_TRADE_DATETIME	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"LastTradeDateTime")	PK
LAST_TRADE_DATE	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"LastTradeDate")	
LAST_TRADE_TIME	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"LastTradeTime")	
LAST	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"PercentChange")	
OPEN	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Low")	
LAST_UPDATE_TIMESTAMP		

## rtd.currencies\_tick\_history\_yahoo

The table contains tick history of currency rates from Yahoo! Finance.

COLUMN_NAME	RTD_FORMULA	COMMENT
ID		PK, IDENTITY
SYMBOL	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Symbol")	
LAST_TRADE_DATETIME	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"LastTradeDateTime")	
LAST_TRADE_DATE	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"LastTradeDate")	
LAST_TRADE_TIME	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"LastTradeTime")	
LAST	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Last")	
CHANGE	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Change")	
PERCENT_CHANGE	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"PercentChange")	
OPEN	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Open")	
HIGH	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"High")	
LOW	=RTD("gartle.rtd","YahooFinanceCurrencies",[SYMBOL],"Low")	

# Real-Time Views for Microsoft Excel

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## Overview

RealTimeToDB allows updating databases with real-time data.

RealTimeToExcel, an included companion product, allows getting real-time data from databases into Microsoft Excel.

You may refresh data in Excel in an easy way.

## Getting Data Using SaveToDB Add-In

The RTD database contains preconfigured views with Excel formulas for RealTimeToExcel with the SaveToDB add-in installed.

The SaveToDB add-in converts text formulas from views into native Excel formulas. Just open any view in Excel.

## Pasting Formulas into Excel

Also, you may copy formulas using **Copy** or (Copy) **Transposed** links and insert formulas into Microsoft Excel.

Select commas or semicolons depend on a separator in your version of Microsoft Excel.

Then adapt the data provider name to your database connections.

For example, change `rtd-mysql` to `rtd-ora` if you use Oracle Database.

## Configuring RealTimeToExcel Providers

RealTimeToExcel has predefined data providers for every database server:

- **rtd-mssql** for Microsoft SQL Server.
- **rtd-sqlce** for Microsoft SQL Server Compact.
- **rtd-mysql** for Oracle MySQL or SkySQL MariaDB.
- **rtd-ora** for Oracle Database.
- **rtd-db2** for IBM DB2.
- **rtd-nuodb** for NuoDB.
- **rtd-pgsql** for PostgreSQL.

These providers are used in the formulas.

You have to specify a correct connection string before the first use.

Edit connection properties for your database in the data provider configuration file in the **DataProviders** directory.



## Preconfigured Real-Time Data Views

SQL Server and SQL Server Compact	MySQL, MariaDB, and PostgreSQL	Oracle Database, IBM DB2, and NuoDB
FundamentalsDayHistoryYahoo	fundamentals_day_history_yahoo	FUNDAMENTALS_DAY_HISTORY_YAHOO
FundamentalsYahoo	fundamentals_yahoo	FUNDAMENTALS_YAHOO
OptionDayHistoryTOS	option_day_history_tos	OPTION_DAY_HISTORY_TOS
OptionDayHistoryTWS	option_day_history_tws	OPTION_DAY_HISTORY_TWS
OptionDayHistoryYahoo	option_day_history_yahoo	OPTION_DAY_HISTORY_YAHOO
OptionDayHistoryGoogle	option_day_history_google	OPTION_DAY_HISTORY_GOOGLE
OptionDayHistoryMsnMoney	option_day_history_msnmoney	OPTION_DAY_HISTORY_MSNMONEY
OptionsTOS	options_tos	OPTIONS_TOS
OptionsTWS	options_tws	OPTIONS_TWS
OptionsYahoo	options_yahoo	OPTIONS_YAHOO
OptionsGoogle	options_google	OPTIONS_GOOGLE
OptionsMsnMoney	options_msnmoney	OPTIONS_MSNMONEY
QuoteDayHistoryES	quote_day_history_es	QUOTE_DAY_HISTORY_ES
QuoteDayHistoryTOS	quote_day_history_tos	QUOTE_DAY_HISTORY_TOS
QuoteDayHistoryTWS	quote_day_history_tws	QUOTE_DAY_HISTORY_TWS
QuoteDayHistoryVFX	quote_day_history_vfx	QUOTE_DAY_HISTORY_VFX
QuoteDayHistoryYahoo	quote_day_history_yahoo	QUOTE_DAY_HISTORY_YAHOO
QuoteDayHistoryMsnMoney	quote_day_history_msnmoney	QUOTE_DAY_HISTORY_MSNMONEY
QuotesES	quotes_es	QUOTES_ES
QuotesTOS	quotes_tos	QUOTES_TOS
QuotesTWS	quotes_tws	QUOTES_TWS
QuotesVFX	quotes_vfx	QUOTES_VFX
QuotesYahoo	quotes_yahoo	QUOTES_YAHOO
QuotesMsnMoney	quotes_msnmoney	QUOTES_MSNMONEY
StocksYahoo	stocks_yahoo	STOCKS_YAHOO
CurrenciesDayHistoryYahoo	currencies_day_history_yahoo	QUOTE_DAY_HISTORY_YAHOO
CurrenciesDayHistoryMsnMoney	currencies_day_history_msnmoney	QUOTE_DAY_HISTORY_MSNMONEY
CurrenciesYahoo	currencies_yahoo	QUOTES_YAHOO
CurrenciesMsnMoney	currencies_msnmoney	QUOTES_MSNMONEY

\* Click on the view name to go to the view description.

# RealTimeToExcel Views for Yahoo! Finance

## Preconfigured Views

SQL Server and SQL Server Compact	MySQL, MariaDB, and PostgreSQL	Oracle Database, IBM DB2, and NuoDB
FundamentalsDayHistoryYahoo	fundamentals_day_history_yahoo	FUNDAMENTALS_DAY_HISTORY_YAHOO
FundamentalsYahoo	fundamentals_yahoo	FUNDAMENTALS_YAHOO
OptionDayHistoryYahoo	option_day_history_yahoo	OPTION_DAY_HISTORY_YAHOO
OptionsYahoo	options_yahoo	OPTIONS_YAHOO
QuoteDayHistoryYahoo	quote_day_history_yahoo	QUOTE_DAY_HISTORY_YAHOO
QuotesYahoo	quotes_yahoo	QUOTES_YAHOO
StocksYahoo	stocks_yahoo	STOCKS_YAHOO
CurrenciesDayHistoryYahoo	currencies_day_history_yahoo	QUOTE_DAY_HISTORY_YAHOO
CurrenciesYahoo	currencies_yahoo	QUOTES_YAHOO

\* Click on the view name to go to the view description.

## Real-Time Views for Microsoft SQL Server and Microsoft SQL Server Compact

### FundamentalsDayHistoryYahoo

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(:)</a> <a href="#">Transposed</a> <a href="#">Transposed(:)</a>
Symbol		
Date		
LastTradeTime	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"LastTradeTime")	
Last	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"Last")	
Change	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PercentChange")	
Open	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"Low")	
Volume	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"Volume")	
DaysRange	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"DaysRange")	
PrevClose	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PrevClose")	
ShortRatio	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"ShortRatio")	
YearHigh	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"YearHigh")	
YearLow	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"YearLow")	
YearRange	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"YearRange")	
ChangeFromYearHigh	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"ChangeFromYearHigh")	
ChangeFromYearLow	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"ChangeFromYearLow")	
PercentChangeFromYearHigh	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PercentChangeFromYearHigh")	
PercentChangeFromYearLow	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PercentChangeFromYearLow")	
MA50	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"MA50")	
MA200	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"MA200")	
ChangeFromMA50	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"ChangeFromMA50")	
ChangeFromMA200	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"ChangeFromMA200")	
PercentChangeFromMA50	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PercentChangeFromMA50")	
PercentChangeFromMA200	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PercentChangeFromMA200")	
AverageDailyVolume	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"AverageDailyVolume")	
OneYearTargetPrice	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"OneYearTargetPrice")	
PE	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PE")	
PEG	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PEG")	
EPSEstCurrentYear	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"EPSEstCurrentYear")	
EPSEstNextQuarter	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"EPSEstNextQuarter")	
EPSEstNextYear	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"EPSEstNextYear")	
EarningsShare	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"EarningsShare")	
MarketCap	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"MarketCap")	
DividendYield	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"DividendYield")	
DividendShare	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"DividendShare")	
ExDividendDate	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"ExDividendDate")	
DividendPayDate	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"DividendPayDate")	
BookValue	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"BookValue")	
PriceBook	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PriceBook")	
PriceSales	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PriceSales")	
PriceEPSEstCurrentYear	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PriceEPSEstCurrentYear")	
PriceEPSEstNextYear	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"PriceEPSEstNextYear")	

EBITDA	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"EBITDA")
CompanyName	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"CompanyName")
StockExchange	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"StockExchange")
Commission	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"Commission")
Notes	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"Notes")
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd","rtd-mssql","FundamentalsDayHistoryYahoo",[Symbol],[Date],"RTD_LastMessage")

## FundamentalsYahoo

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
LastTradeDate	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"Last")	
Change	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"Open")	
High	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"High")	
Low	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"Low")	
Volume	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"Volume")	
DaysRange	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"DaysRange")	
PrevClose	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PrevClose")	
ShortRatio	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"ShortRatio")	
YearHigh	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"YearHigh")	
YearLow	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"YearLow")	
YearRange	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"YearRange")	
ChangeFromYearHigh	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"ChangeFromYearHigh")	
ChangeFromYearLow	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"ChangeFromYearLow")	
PercentChangeFromYearHigh	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PercentChangeFromYearHigh")	
PercentChangeFromYearLow	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PercentChangeFromYearLow")	
MA50	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"MA50")	
MA200	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"MA200")	
ChangeFromMA50	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"ChangeFromMA50")	
ChangeFromMA200	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"ChangeFromMA200")	
PercentChangeFromMA50	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PercentChangeFromMA50")	
PercentChangeFromMA200	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PercentChangeFromMA200")	
AverageDailyVolume	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"AverageDailyVolume")	
OneYearTargetPrice	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"OneYearTargetPrice")	
PE	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PE")	
PEG	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PEG")	
EPSEstCurrentYear	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"EPSEstCurrentYear")	
EPSEstNextQuarter	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"EPSEstNextQuarter")	
EPSEstNextYear	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"EPSEstNextYear")	
EarningsShare	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"EarningsShare")	
MarketCap	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"MarketCap")	
DividendYield	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"DividendYield")	
DividendShare	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"DividendShare")	
ExDividendDate	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"ExDividendDate")	
DividendPayDate	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"DividendPayDate")	
BookValue	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"BookValue")	
PriceBook	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PriceBook")	
PriceSales	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PriceSales")	
PriceEPSEstCurrentYear	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PriceEPSEstCurrentYear")	
PriceEPSEstNextYear	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"PriceEPSEstNextYear")	
EBITDA	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"EBITDA")	
CompanyName	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"CompanyName")	
StockExchange	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"StockExchange")	
Commission	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"Commission")	
Notes	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"Notes")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mssql","FundamentalsYahoo",[Symbol],"RTD_LastMessage")	

## OptionDayHistoryYahoo

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Code		

Date	
Time	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Time")
OptionCode	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"OptionCode")
Symbol	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Symbol")
OptionSymbol	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"OptionSymbol")
ExpDate	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"ExpDate")
Strike	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Strike")
Type	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Type")
Last	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Last")
Change	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Change")
PercentChange	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"PercentChange")
Mark	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Mark")
Bid	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Bid")
Ask	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Ask")
Volume	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"Volume")
OpenInt	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"OpenInt")
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","OptionDayHistoryYahoo",[Code],[Date],"RTD_LastMessage")

## OptionsYahoo

COLUMN_NAME	EXCEL FORMULA	<u>Copy Copy(:) Transposed Transposed(:)</u>
Code		
Date	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Date")	
Time	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Time")	
OptionCode	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Symbol")	
OptionSymbol	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"ExpDate")	
Strike	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Strike")	
Type	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Type")	
Last	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"PercentChange")	
Mark	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Mark")	
Bid	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Bid")	
Ask	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Ask")	
Volume	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"OpenInt")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","OptionsYahoo",[Code],"RTD_LastMessage")	

## QuoteDayHistoryYahoo

COLUMN_NAME	EXCEL FORMULA	<u>Copy Copy(:) Transposed Transposed(:)</u>
Symbol		
Date		
LastTradeTime	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"Low")	
Volume	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"Volume")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryYahoo",[Symbol],[Date],"RTD_LastMessage")	

## QuotesYahoo

COLUMN_NAME	EXCEL FORMULA	<u>Copy Copy(:) Transposed Transposed(:)</u>
Symbol		
LastTradeDate	=RTD("gartle.rtd",,"rtd-mssql","QuotesYahoo",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd",,"rtd-mssql","QuotesYahoo",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"rtd-mssql","QuotesYahoo",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mssql","QuotesYahoo",[Symbol],"Change")	

PercentChange	=RTD("gartle.rtd","rtd-mssql","QuotesYahoo",[Symbol],"PercentChange")
Open	=RTD("gartle.rtd","rtd-mssql","QuotesYahoo",[Symbol],"Open")
High	=RTD("gartle.rtd","rtd-mssql","QuotesYahoo",[Symbol],"High")
Low	=RTD("gartle.rtd","rtd-mssql","QuotesYahoo",[Symbol],"Low")
Volume	=RTD("gartle.rtd","rtd-mssql","QuotesYahoo",[Symbol],"Volume")
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","QuotesYahoo",[Symbol],"LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd","rtd-mssql","QuotesYahoo",[Symbol],"RTD_LastMessage")

## StocksYahoo

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
CompanyName	=RTD("gartle.rtd","rtd-mssql","StocksYahoo",[Symbol],"CompanyName")	
Sector	=RTD("gartle.rtd","rtd-mssql","StocksYahoo",[Symbol],"Sector")	
Industry	=RTD("gartle.rtd","rtd-mssql","StocksYahoo",[Symbol],"Industry")	
FullTimeEmployees	=RTD("gartle.rtd","rtd-mssql","StocksYahoo",[Symbol],"FullTimeEmployees")	
TradeStart	=RTD("gartle.rtd","rtd-mssql","StocksYahoo",[Symbol],"TradeStart")	
TradeEnd	=RTD("gartle.rtd","rtd-mssql","StocksYahoo",[Symbol],"TradeEnd")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","StocksYahoo",[Symbol],"LastUpdateTimeStamp")	

## CurrenciesDayHistoryYahoo

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date		
LastTradeTime	=RTD("gartle.rtd","rtd-mssql","CurrenciesDayHistoryYahoo",[Symbol],[Date],"LastTradeTime")	
Last	=RTD("gartle.rtd","rtd-mssql","CurrenciesDayHistoryYahoo",[Symbol],[Date],"Last")	
Change	=RTD("gartle.rtd","rtd-mssql","CurrenciesDayHistoryYahoo",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mssql","CurrenciesDayHistoryYahoo",[Symbol],[Date],"PercentChange")	
Open	=RTD("gartle.rtd","rtd-mssql","CurrenciesDayHistoryYahoo",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd","rtd-mssql","CurrenciesDayHistoryYahoo",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd","rtd-mssql","CurrenciesDayHistoryYahoo",[Symbol],[Date],"Low")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","CurrenciesDayHistoryYahoo",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mssql","CurrenciesDayHistoryYahoo",[Symbol],[Date],"RTD_LastMessage")	

## CurrenciesYahoo

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
LastTradeDate	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"Last")	
Change	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"Open")	
High	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"High")	
Low	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"Low")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mssql","CurrenciesYahoo",[Symbol],"RTD_LastMessage")	

## Real-Time Views for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### fundamentals\_day\_history\_yahoo

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date		
LastTradeTime	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"LastTradeTime")	
Last	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"Last")	
Change	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PercentChange")	
Open	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"Low")	
Volume	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"Volume")	

DaysRange	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"DaysRange")
PrevClose	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PrevClose")
ShortRatio	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"ShortRatio")
YearHigh	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"YearHigh")
YearLow	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"YearLow")
YearRange	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"YearRange")
ChangeFromYearHigh	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"ChangeFromYearHigh")
ChangeFromYearLow	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"ChangeFromYearLow")
PercentChangeFromYearHigh	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PercentChangeFromYearHigh")
PercentChangeFromYearLow	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PercentChangeFromYearLow")
MA50	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"MA50")
MA200	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"MA200")
ChangeFromMA50	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"ChangeFromMA50")
ChangeFromMA200	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"ChangeFromMA200")
PercentChangeFromMA50	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PercentChangeFromMA50")
PercentChangeFromMA200	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PercentChangeFromMA200")
AverageDailyVolume	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"AverageDailyVolume")
OneYearTargetPrice	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"OneYearTargetPrice")
PE	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PE")
PEG	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PEG")
EPSEstCurrentYear	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"EPSEstCurrentYear")
EPSEstNextQuarter	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"EPSEstNextQuarter")
EPSEstNextYear	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"EPSEstNextYear")
EarningsShare	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"EarningsShare")
MarketCap	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"MarketCap")
DividendYield	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"DividendYield")
DividendShare	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"DividendShare")
ExDividendDate	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"ExDividendDate")
DividendPayDate	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"DividendPayDate")
BookValue	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"BookValue")
PriceBook	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PriceBook")
PriceSales	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PriceSales")
PriceEPSEstCurrentYear	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PriceEPSEstCurrentYear")
PriceEPSEstNextYear	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"PriceEPSEstNextYear")
EBITDA	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"EBITDA")
CompanyName	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"CompanyName")
StockExchange	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"StockExchange")
Commission	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"Commission")
Notes	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"Notes")
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd","rtd-mysql","fundamentals_day_history_yahoo",[Symbol],[Date],"RTD_LastMessage")

## fundamentals\_yahoo

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(;) Transposed</u> <u>Transposed(;)</u>
Symbol		
LastTradeDate	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"Last")	
Change	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"Open")	
High	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"High")	
Low	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"Low")	
Volume	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"Volume")	
DaysRange	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"DaysRange")	
PrevClose	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PrevClose")	
ShortRatio	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"ShortRatio")	
YearHigh	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"YearHigh")	
YearLow	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"YearLow")	
YearRange	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"YearRange")	
ChangeFromYearHigh	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"ChangeFromYearHigh")	
ChangeFromYearLow	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"ChangeFromYearLow")	
PercentChangeFromYearHigh	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PercentChangeFromYearHigh")	
PercentChangeFromYearLow	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PercentChangeFromYearLow")	
MA50	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"MA50")	
MA200	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"MA200")	



ChangeFromMA50	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"ChangeFromMA50")
ChangeFromMA200	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"ChangeFromMA200")
PercentChangeFromMA50	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PercentChangeFromMA50")
PercentChangeFromMA200	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PercentChangeFromMA200")
AverageDailyVolume	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"AverageDailyVolume")
OneYearTargetPrice	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"OneYearTargetPrice")
PE	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PE")
PEG	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PEG")
EPSEstCurrentYear	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"EPSEstCurrentYear")
EPSEstNextQuarter	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"EPSEstNextQuarter")
EPSEstNextYear	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"EPSEstNextYear")
EarningsShare	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"EarningsShare")
MarketCap	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"MarketCap")
DividendYield	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"DividendYield")
DividendShare	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"DividendShare")
ExDividendDate	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"ExDividendDate")
DividendPayDate	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"DividendPayDate")
BookValue	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"BookValue")
PriceBook	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PriceBook")
PriceSales	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PriceSales")
PriceEPSEstCurrentYear	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PriceEPSEstCurrentYear")
PriceEPSEstNextYear	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"PriceEPSEstNextYear")
EBITDA	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"EBITDA")
CompanyName	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"CompanyName")
StockExchange	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"StockExchange")
Commission	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"Commission")
Notes	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"Notes")
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd","rtd-mysql","fundamentals_yahoo",[Symbol],"RTD_LastMessage")

## option\_day\_history\_yahoo

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(;)</u> <u>Transposed</u> <u>Transposed(;)</u>
Code		
Date		
Time	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Time")	
OptionCode	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"OptionCode")	
Symbol	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Symbol")	
OptionSymbol	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"ExpDate")	
Strike	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Strike")	
Type	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Type")	
Last	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Last")	
Change	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"PercentChange")	
Mark	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Mark")	
Bid	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Bid")	
Ask	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Ask")	
Volume	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"Volume")	
OpenInt	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"OpenInt")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mysql","option_day_history_yahoo",[Code],[Date],"RTD_LastMessage")	

## options\_yahoo

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(;)</u> <u>Transposed</u> <u>Transposed(;)</u>
Code		
Date	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"Date")	
Time	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"Time")	
OptionCode	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"Symbol")	
OptionSymbol	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"ExpDate")	
Strike	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"Strike")	
Type	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"Type")	
Last	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"Last")	
Change	=RTD("gartle.rtd","rtd-mysql","options_yahoo",[Code],"Change")	

PercentChange	=RTD("gartle.rtd",,"rtd-mysql","options_yahoo",[Code],"PercentChange")
Mark	=RTD("gartle.rtd",,"rtd-mysql","options_yahoo",[Code],"Mark")
Bid	=RTD("gartle.rtd",,"rtd-mysql","options_yahoo",[Code],"Bid")
Ask	=RTD("gartle.rtd",,"rtd-mysql","options_yahoo",[Code],"Ask")
Volume	=RTD("gartle.rtd",,"rtd-mysql","options_yahoo",[Code],"Volume")
OpenInt	=RTD("gartle.rtd",,"rtd-mysql","options_yahoo",[Code],"OpenInt")
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","options_yahoo",[Code],"LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","options_yahoo",[Code],"RTD_LastMessage")

## quote\_day\_history\_yahoo

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date		
LastTradeTime	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"Low")	
Volume	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"Volume")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_yahoo",[Symbol],[Date],"RTD_LastMessage")	

## quotes\_yahoo

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
LastTradeDate	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"Low")	
Volume	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"Volume")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","quotes_yahoo",[Symbol],"RTD_LastMessage")	



## stocks\_yahoo

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(:)</a> <a href="#">Transposed</a> <a href="#">Transposed(:)</a>
Symbol		
CompanyName	=RTD("gartle.rtd",,"rtd-mysql","stocks_yahoo",[Symbol],"CompanyName")	
Sector	=RTD("gartle.rtd",,"rtd-mysql","stocks_yahoo",[Symbol],"Sector")	
Industry	=RTD("gartle.rtd",,"rtd-mysql","stocks_yahoo",[Symbol],"Industry")	
FullTimeEmployees	=RTD("gartle.rtd",,"rtd-mysql","stocks_yahoo",[Symbol],"FullTimeEmployees")	
TradeStart	=RTD("gartle.rtd",,"rtd-mysql","stocks_yahoo",[Symbol],"TradeStart")	
TradeEnd	=RTD("gartle.rtd",,"rtd-mysql","stocks_yahoo",[Symbol],"TradeEnd")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","stocks_yahoo",[Symbol],"LastUpdateTimeStamp")	

## currencies\_day\_history\_yahoo

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(:)</a> <a href="#">Transposed</a> <a href="#">Transposed(:)</a>
Symbol		
Date		
LastTradeTime	=RTD("gartle.rtd",,"rtd-mysql","currencies_day_history_yahoo",[Symbol],[Date],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"rtd-mysql","currencies_day_history_yahoo",[Symbol],[Date],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","currencies_day_history_yahoo",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","currencies_day_history_yahoo",[Symbol],[Date],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mysql","currencies_day_history_yahoo",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd",,"rtd-mysql","currencies_day_history_yahoo",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd",,"rtd-mysql","currencies_day_history_yahoo",[Symbol],[Date],"Low")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","currencies_day_history_yahoo",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","currencies_day_history_yahoo",[Symbol],[Date],"RTD_LastMessage")	

## currencies\_yahoo

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(:)</a> <a href="#">Transposed</a> <a href="#">Transposed(:)</a>
Symbol		
LastTradeDate	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"LastTradeDate")	
LastTradeTime	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"LastTradeTime")	
Last	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"Low")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","currencies_yahoo",[Symbol],"RTD_LastMessage")	

# RealTimeToExcel Views for Google Finance

## Preconfigured Views

SQL Server and SQL Server Compact	MySQL, MariaDB, and PostgreSQL	Oracle Database, IBM DB2, and NuoDB
OptionDayHistoryGoogle	option_day_history_google	OPTION_DAY_HISTORY_GOOGLE
OptionsGoogle	options_google	OPTIONS_GOOGLE

\* Click on the view name to go to the view description.

## Real-Time Views for Microsoft SQL Server and Microsoft SQL Server Compact

### OptionDayHistoryGoogle

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(;) Transposed</a> <a href="#">Transposed(;)</a>
Code		
Date		
Time	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Time")	
OptionCode	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"OptionCode")	
Symbol	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Symbol")	
OptionSymbol	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"ExpDate")	
Strike	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Strike")	
Type	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Type")	
Last	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Last")	
Change	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"PercentChange")	
Mark	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Mark")	
Bid	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Bid")	
Ask	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Ask")	
Volume	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"Volume")	
OpenInt	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"OpenInt")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mssql","OptionDayHistoryGoogle",[Code],[Date],"RTD_LastMessage")	

### OptionsGoogle

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(;) Transposed</a> <a href="#">Transposed(;)</a>
Code		
Date	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Date")	
Time	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Time")	
OptionCode	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Symbol")	
OptionSymbol	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"ExpDate")	
Strike	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Strike")	
Type	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Type")	
Last	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Last")	
Change	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"PercentChange")	
Mark	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Mark")	
Bid	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Bid")	
Ask	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Ask")	
Volume	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"OpenInt")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mssql","OptionsGoogle",[Code],"RTD_LastMessage")	

## Real-Time Views for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### option\_day\_history\_google

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(;) Transposed</a> <a href="#">Transposed(;)</a>
Code		

Date	
Time	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Time")
OptionCode	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "OptionCode")
Symbol	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Symbol")
OptionSymbol	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "OptionSymbol")
ExpDate	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "ExpDate")
Strike	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Strike")
Type	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Type")
Last	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Last")
Change	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Change")
PercentChange	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "PercentChange")
Mark	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Mark")
Bid	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Bid")
Ask	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Ask")
Volume	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "Volume")
OpenInt	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "OpenInt")
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_google", [Code], [Date], "RTD_LastMessage")

## options\_google

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Code		
Date	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Date")	
Time	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Time")	
OptionCode	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "OptionCode")	
Symbol	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Symbol")	
OptionSymbol	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "OptionSymbol")	
ExpDate	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "ExpDate")	
Strike	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Strike")	
Type	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Type")	
Last	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Last")	
Change	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "PercentChange")	
Mark	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Mark")	
Bid	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Ask")	
Volume	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "OpenInt")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mysql", "options_google", [Code], "RTD_LastMessage")	

## RealTimeToExcel Views for MSN Money

### Preconfigured Views

SQL Server and SQL Server Compact	MySQL, MariaDB, and PostgreSQL	Oracle Database, IBM DB2, and Nuodb
OptionDayHistoryMsnMoney	option_day_history_msnmoney	OPTION_DAY_HISTORY_MSNMONEY
OptionsMsnMoney	options_msnmoney	OPTIONS_MSNMONEY
QuoteDayHistoryMsnMoney	quote_day_history_msnmoney	QUOTE_DAY_HISTORY_MSNMONEY
QuotesMsnMoney	quotes_msnmoney	QUOTES_MSNMONEY
CurrenciesDayHistoryMsnMoney	currencies_day_history_msnmoney	QUOTE_DAY_HISTORY_MSNMONEY
CurrenciesMsnMoney	currencies_msnmoney	QUOTES_MSNMONEY

\* Click on the view name to go to the view description.

## Real-Time Views for Microsoft SQL Server and Microsoft SQL Server Compact

### OptionDayHistoryMsnMoney

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(;) Transposed</a> <a href="#">Transposed(;)</a>
Code		
Date		
Time	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Time")	
OptionCode	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "OptionCode")	
Symbol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Symbol")	
OptionSymbol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "OptionSymbol")	
ExpDate	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "ExpDate")	
Strike	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Strike")	
Type	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Type")	
Last	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Last")	
Change	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "PercentChange")	
Mark	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Mark")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Ask")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "OpenInt")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryMsnMoney", [Code], [Date], "RTD_LastMessage")	

### OptionsMsnMoney

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(;) Transposed</a> <a href="#">Transposed(;)</a>
Code		
Date	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Date")	
Time	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Time")	
OptionCode	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "OptionCode")	
Symbol	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Symbol")	
OptionSymbol	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "OptionSymbol")	
ExpDate	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "ExpDate")	
Strike	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Strike")	
Type	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Type")	
Last	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Last")	
Change	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "PercentChange")	
Mark	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Mark")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Ask")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "OpenInt")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "OptionsMsnMoney", [Code], "RTD_LastMessage")	

### QuoteDayHistoryMsnMoney

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(;) Transposed</a> <a href="#">Transposed(;)</a>
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Symbol	
Date	
Time	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"Time")
Last	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"Last")
Change	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"Change")
PercentChange	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"PercentChange")
Open	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"Open")
High	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"High")
Low	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"Low")
Volume	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"Volume")
YearHigh	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"YearHigh")
YearLow	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"YearLow")
PE	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"PE")
EPS	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"EPS")
MarketCap	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"MarketCap")
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryMsnMoney",[Symbol],[Date],"RTD_LastMessage")

## QuotesMsnMoney

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"Date")	
Time	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"Time")	
Last	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"Low")	
Volume	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"Volume")	
YearHigh	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],[Date],"YearHigh")	
YearLow	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],[Date],"YearLow")	
PE	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],[Date],"PE")	
EPS	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],[Date],"EPS")	
MarketCap	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],[Date],"MarketCap")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","QuotesMsnMoney",[Symbol],"RTD_LastMessage")	

## CurrenciesDayHistoryMsnMoney

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date		
Time	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesDayHistoryMsnMoney",[Symbol],[Date],"Time")	
Last	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesDayHistoryMsnMoney",[Symbol],[Date],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesDayHistoryMsnMoney",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesDayHistoryMsnMoney",[Symbol],[Date],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesDayHistoryMsnMoney",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesDayHistoryMsnMoney",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesDayHistoryMsnMoney",[Symbol],[Date],"Low")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesDayHistoryMsnMoney",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesDayHistoryMsnMoney",[Symbol],[Date],"RTD_LastMessage")	

## CurrenciesMsnMoney

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"Date")	
Time	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"Time")	
Last	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"Low")	

LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","CurrenciesMsnMoney",[Symbol],"RTD_LastMessage")

## Real-Time Views for MySQL, MariaDB, Oracle Database, IBM DB2, NuoDB, and PostgreSQL

### option\_day\_history\_msnmoney

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Code		
Date		
Time	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Time")	
OptionCode	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"OptionCode")	
Symbol	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Symbol")	
OptionSymbol	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"ExpDate")	
Strike	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Strike")	
Type	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Type")	
Last	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"PercentChange")	
Mark	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Mark")	
Bid	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Bid")	
Ask	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Ask")	
Volume	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"Volume")	
OpenInt	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"OpenInt")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","option_day_history_msnmoney",[Code],[Date],"RTD_LastMessage")	

### options\_msnmoney

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Code		
Date	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Date")	
Time	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Time")	
OptionCode	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"OptionCode")	
Symbol	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Symbol")	
OptionSymbol	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"OptionSymbol")	
ExpDate	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"ExpDate")	
Strike	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Strike")	
Type	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Type")	
Last	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"PercentChange")	
Mark	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Mark")	
Bid	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Bid")	
Ask	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Ask")	
Volume	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"OpenInt")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","options_msnmoney",[Code],"RTD_LastMessage")	

### quote\_day\_history\_msnmoney

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date		
Time	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"Time")	
Last	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"Low")	
Volume	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"Volume")	
YearHigh	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"YearHigh")	
YearLow	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"YearLow")	

YearRange	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"YearRange")
PE	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"PE")
EPS	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"EPS")
MarketCap	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"MarketCap")
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"LastUpdateTimeStamp")
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_msnmoney",[Symbol],[Date],"RTD_LastMessage")

## quotes\_msnmoney

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(:)</u> <u>Transposed</u> <u>Transposed(:)</u>
Symbol		
Date	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"Date")	
Time	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"Time")	
Last	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"PercentChange")	
Open	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"Low")	
Volume	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"Volume")	
YearHigh	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],[Date],"YearHigh")	
YearLow	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],[Date],"YearLow")	
YearRange	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],[Date],"YearRange")	
PE	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],[Date],"PE")	
EPS	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],[Date],"EPS")	
MarketCap	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],[Date],"MarketCap")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","quotes_msnmoney",[Symbol],"RTD_LastMessage")	

## stocks\_msnmoney

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
CompanyName	=RTD("gartle.rtd", "rtd-mysql", "stocks_msnmoney", [Symbol], "CompanyName")	
Sector	=RTD("gartle.rtd", "rtd-mysql", "stocks_msnmoney", [Symbol], "Sector")	
Industry	=RTD("gartle.rtd", "rtd-mysql", "stocks_msnmoney", [Symbol], "Industry")	
FullTimeEmployees	=RTD("gartle.rtd", "rtd-mysql", "stocks_msnmoney", [Symbol], "FullTimeEmployees")	
TradeStart	=RTD("gartle.rtd", "rtd-mysql", "stocks_msnmoney", [Symbol], "TradeStart")	
TradeEnd	=RTD("gartle.rtd", "rtd-mysql", "stocks_msnmoney", [Symbol], "TradeEnd")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "stocks_msnmoney", [Symbol], "LastUpdateTimeStamp")	

## currencies\_day\_history\_msnmoney

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date		
Time	=RTD("gartle.rtd", "rtd-mysql", "currencies_day_history_msnmoney", [Symbol], [Date], "Time")	
Last	=RTD("gartle.rtd", "rtd-mysql", "currencies_day_history_msnmoney", [Symbol], [Date], "Last")	
Change	=RTD("gartle.rtd", "rtd-mysql", "currencies_day_history_msnmoney", [Symbol], [Date], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mysql", "currencies_day_history_msnmoney", [Symbol], [Date], "PercentChange")	
Open	=RTD("gartle.rtd", "rtd-mysql", "currencies_day_history_msnmoney", [Symbol], [Date], "Open")	
High	=RTD("gartle.rtd", "rtd-mysql", "currencies_day_history_msnmoney", [Symbol], [Date], "High")	
Low	=RTD("gartle.rtd", "rtd-mysql", "currencies_day_history_msnmoney", [Symbol], [Date], "Low")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "currencies_day_history_msnmoney", [Symbol], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mysql", "currencies_day_history_msnmoney", [Symbol], [Date], "RTD_LastMessage")	

## currencies\_msnmoney

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "Date")	
Time	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "Time")	
Last	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "PercentChange")	
Open	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "Open")	
High	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "High")	
Low	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "Low")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mysql", "currencies_msnmoney", [Symbol], "RTD_LastMessage")	



# RealTimeToExcel Views for Thinkorswim thinkDesktop

## Preconfigured Views

SQL Server and SQL Server Compact	MySQL, MariaDB, and PostgreSQL	Oracle Database, IBM DB2, and Nuodb
OptionDayHistoryTOS	option_day_history_tos	OPTION_DAY_HISTORY_TOS
OptionsTOS	options_tos	OPTIONS_TOS
QuoteDayHistoryTOS	quote_day_history_tos	QUOTE_DAY_HISTORY_TOS
QuotesTOS	quotes_tos	QUOTES_TOS

\* Click on the view name to go to the view description.

## Real-Time Views for Microsoft SQL Server and Microsoft SQL Server Compact

### OptionDayHistoryTOS

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(,)</a> <a href="#">Transposed</a> <a href="#">Transposed(,)</a>
Code		
Date		
Time	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Time")	
Description	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Description")	
Last	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Last")	
Change	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "PercentChange")	
LastSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "LastSize")	
LastX	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "LastX")	
Mark	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Mark")	
MarkChange	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "MarkChange")	
MarkPercentChange	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "MarkPercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "AskSize")	
BidAskSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "BidAskSize")	
BidX	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "BidX")	
AskX	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "AskX")	
Open	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Open")	
High	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "High")	
Low	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Low")	
Close	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "OpenInt")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "ImpliedVol")	
Delta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Delta")	
Gamma	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Gamma")	
Theta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Theta")	
Vega	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Vega")	
Rho	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Rho")	
Extrinsic	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Extrinsic")	
Intrinsic	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "Intrinsic")	
ProbabilityITM	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "ProbabilityITM")	
ProbabilityOTM	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "ProbabilityOTM")	
ProbabilityTouch	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "ProbabilityTouch")	
CoveredReturn	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "CoveredReturn")	
MaxCoveredReturn	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "MaxCoveredReturn")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTOS", [Code], [Date], "RTD_LastMessage")	

## OptionDayHistoryTWS

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(,)</u> <u>Transposed</u> <u>Transposed(,)</u>
Code		
Date		
Time	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Time")	
Last	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Last")	
LastSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "LastSize")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "AskSize")	
High	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "High")	
Low	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Low")	
Close	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Volume")	
UnderlyingPrice	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "UnderlyingPrice")	
ModelPrice	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "ModelPrice")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "ImpliedVol")	
BidImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "BidImpliedVol")	
AskImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "AskImpliedVol")	
LastImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "LastImpliedVol")	
BidDelta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "BidDelta")	
AskDelta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "AskDelta")	
LastDelta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "LastDelta")	
Delta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Delta")	
Gamma	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Gamma")	
Theta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Theta")	
Vega	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Vega")	
pvDividend	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "pvDividend")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "RTD_LastMessage")	

## OptionsTOS

COLUMN_NAME	EXCEL FORMULA	<u>Copy Copy(:)</u> <u>Transposed Transposed(:)</u>
Code		
Date	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Date")	
Time	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Time")	
Description	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Description")	
Last	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Last")	
Change	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "PercentChange")	
LastSize	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "LastSize")	
LastX	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "LastX")	
Mark	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Mark")	
MarkChange	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "MarkChange")	
MarkPercentChange	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "MarkPercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "AskSize")	
BidAskSize	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "BidAskSize")	
BidX	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "BidX")	
AskX	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "AskX")	
Open	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Open")	
High	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "High")	
Low	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Low")	
Close	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "OpenInt")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "ImpliedVol")	
Delta	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Delta")	
Gamma	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Gamma")	
Theta	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Theta")	
Vega	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Vega")	
Rho	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Rho")	
Extrinsic	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Extrinsic")	
Intrinsic	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "Intrinsic")	
ProbabilityITM	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "ProbabilityITM")	
ProbabilityOTM	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "ProbabilityOTM")	
ProbabilityTouch	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "ProbabilityTouch")	
CoveredReturn	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "CoveredReturn")	
MaxCoveredReturn	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "MaxCoveredReturn")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "OptionsTOS", [Code], "RTD_LastMessage")	

## QuoteDayHistoryTOS

COLUMN_NAME	EXCEL FORMULA	<u>Copy Copy(:) Transposed Transposed(:)</u>
Symbol		
Date		
Time	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Time")	
Description	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Description")	
Last	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Last")	
Change	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "PercentChange")	
LastSize	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "LastSize")	
LastX	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "LastX")	
Mark	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Mark")	
MarkChange	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "MarkChange")	
MarkPercentChange	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "MarkPercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "AskSize")	
BidAskSize	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "BidAskSize")	
BidX	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "BidX")	
AskX	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "AskX")	
StrengthMeter	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "StrengthMeter")	
Open	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Open")	
High	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "High")	
Low	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Low")	
Close	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "OpenInt")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "ImpliedVol")	
VolIndex	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "VolIndex")	
FrontVol	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "FrontVol")	
BackVol	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "BackVol")	
WeightedBackVol	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "WeightedBackVol")	
VolDiff	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "VolDiff")	
PutCallRatio	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "PutCallRatio")	
CallVolumeIndex	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "CallVolumeIndex")	
PutVolumeIndex	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "PutVolumeIndex")	
OptionVolumeIndex	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "OptionVolumeIndex")	
FrontExpectedMove	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "FrontExpectedMove")	
BackExpectedMove	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "BackExpectedMove")	
ExpectedMoveDiff	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "ExpectedMoveDiff")	
Beta	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Beta")	
High52	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "High52")	
Low52	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Low52")	
PE	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "PE")	
EPS	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "EPS")	
MarketCap	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "MarketCap")	
Shares	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "Shares")	
DividendYield	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "DividendYield")	
DividendShare	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "DividendShare")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryTOS", [Symbol], [Date], "RTD_LastMessage")	

## QuotesTOS

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(:)</u> <u>Transposed</u> <u>Transposed(:)</u>
Symbol		
Date	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Date")	
Time	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Time")	
Description	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Description")	
Last	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "PercentChange")	
LastSize	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "LastSize")	
LastX	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "LastX")	
Mark	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Mark")	
MarkChange	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "MarkChange")	
MarkPercentChange	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "MarkPercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "AskSize")	
BidAskSize	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "BidAskSize")	
BidX	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "BidX")	
AskX	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "AskX")	
StrengthMeter	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "StrengthMeter")	
Open	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Open")	
High	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "High")	
Low	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Low")	
Close	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "OpenInt")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "ImpliedVol")	
VolIndex	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "VolIndex")	
FrontVol	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "FrontVol")	
BackVol	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "BackVol")	
WeightedBackVol	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "WeightedBackVol")	
VolDiff	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "VolDiff")	
PutCallRatio	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "PutCallRatio")	
CallVolumeIndex	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "CallVolumeIndex")	
PutVolumeIndex	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "PutVolumeIndex")	
OptionVolumeIndex	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "OptionVolumeIndex")	
FrontExpectedMove	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "FrontExpectedMove")	
BackExpectedMove	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "BackExpectedMove")	
ExpectedMoveDiff	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "ExpectedMoveDiff")	
Beta	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Beta")	
High52	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "High52")	
Low52	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Low52")	
PE	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "PE")	
EPS	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "EPS")	
MarketCap	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "MarketCap")	
Shares	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "Shares")	
DividendYield	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "DividendYield")	
DividendShare	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "DividendShare")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "QuotesTOS", [Symbol], "RTD_LastMessage")	

## option\_day\_history\_tos

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Code		
Date		
Time	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Time")	
Description	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Description")	
Last	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Last")	
Change	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "PercentChange")	
LastSize	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "LastSize")	
LastX	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "LastX")	
Mark	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Mark")	
MarkChange	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "MarkChange")	
MarkPercentChange	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "MarkPercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "AskSize")	
BidAskSize	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "BidAskSize")	
BidX	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "BidX")	
AskX	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "AskX")	
Open	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Open")	
High	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "High")	
Low	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Low")	
Close	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "OpenInt")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "ImpliedVol")	
Delta	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Delta")	
Gamma	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Gamma")	
Theta	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Theta")	
Vega	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Vega")	
Rho	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Rho")	
Extrinsic	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Extrinsic")	
Intrinsic	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "Intrinsic")	
ProbabilityITM	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "ProbabilityITM")	
ProbabilityOTM	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "ProbabilityOTM")	
ProbabilityTouch	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "ProbabilityTouch")	
CoveredReturn	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "CoveredReturn")	
MaxCoveredReturn	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "MaxCoveredReturn")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tos", [Code], [Date], "RTD_LastMessage")	

## options\_tos

COLUMN_NAME	EXCEL FORMULA	<u>Copy Copy(:)</u> <u>Transposed Transposed(:)</u>
Code		
Date	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Date")	
Time	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Time")	
Description	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Description")	
Last	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"PercentChange")	
LastSize	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"LastSize")	
LastX	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"LastX")	
Mark	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Mark")	
MarkChange	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"MarkChange")	
MarkPercentChange	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"MarkPercentChange")	
Bid	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Bid")	
Ask	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Ask")	
BidSize	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"BidSize")	
AskSize	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"AskSize")	
BidAskSize	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"BidAskSize")	
BidX	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"BidX")	
AskX	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"AskX")	
Open	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Open")	
High	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"High")	
Low	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Low")	
Close	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Close")	
Volume	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Volume")	
OpenInt	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"OpenInt")	
ImpliedVol	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"ImpliedVol")	
Delta	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Delta")	
Gamma	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Gamma")	
Theta	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Theta")	
Vega	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Vega")	
Rho	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Rho")	
Extrinsic	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Extrinsic")	
Intrinsic	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"Intrinsic")	
ProbabilityITM	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"ProbabilityITM")	
ProbabilityOTM	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"ProbabilityOTM")	
ProbabilityTouch	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"ProbabilityTouch")	
CoveredReturn	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"CoveredReturn")	
MaxCoveredReturn	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"MaxCoveredReturn")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","options_tos",[Code],"RTD_LastMessage")	

## quote\_day\_history\_tos

COLUMN_NAME	EXCEL FORMULA	<u>Copy Copy(:) Transposed Transposed(:)</u>
Symbol		
Date		
Time	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Time")	
Description	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Description")	
Last	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Last")	
Change	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"PercentChange")	
LastSize	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"LastSize")	
LastX	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"LastX")	
Mark	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Mark")	
MarkChange	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"MarkChange")	
MarkPercentChange	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"MarkPercentChange")	
Bid	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Bid")	
Ask	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Ask")	
BidSize	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"BidSize")	
AskSize	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"AskSize")	
BidAskSize	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"BidAskSize")	
BidX	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"BidX")	
AskX	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"AskX")	
StrengthMeter	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"StrengthMeter")	
Open	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Low")	
Close	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Close")	
Volume	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Volume")	
OpenInt	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"OpenInt")	
ImpliedVol	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"ImpliedVol")	
VolIndex	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"VolIndex")	
FrontVol	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"FrontVol")	
BackVol	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"BackVol")	
WeightedBackVol	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"WeightedBackVol")	
VolDiff	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"VolDiff")	
PutCallRatio	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"PutCallRatio")	
CallVolumeIndex	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"CallVolumeIndex")	
PutVolumeIndex	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"PutVolumeIndex")	
OptionVolumeIndex	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"OptionVolumeIndex")	
FrontExpectedMove	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"FrontExpectedMove")	
BackExpectedMove	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"BackExpectedMove")	
ExpectedMoveDiff	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"ExpectedMoveDiff")	
Beta	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Beta")	
High52	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"High52")	
Low52	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Low52")	
PE	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"PE")	
EPS	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"EPS")	
MarketCap	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"MarketCap")	
Shares	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"Shares")	
DividendYield	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"DividendYield")	
DividendShare	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"DividendShare")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","quote_day_history_tos",[Symbol],[Date],"RTD_LastMessage")	



## quotes\_tos

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Date")	
Time	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Time")	
Description	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Description")	
Last	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "PercentChange")	
LastSize	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "LastSize")	
LastX	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "LastX")	
Mark	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Mark")	
MarkChange	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "MarkChange")	
MarkPercentChange	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "MarkPercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "AskSize")	
BidAskSize	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "BidAskSize")	
BidX	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "BidX")	
AskX	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "AskX")	
StrengthMeter	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "StrengthMeter")	
Open	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Open")	
High	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "High")	
Low	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Low")	
Close	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "OpenInt")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "ImpliedVol")	
VolIndex	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "VolIndex")	
FrontVol	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "FrontVol")	
BackVol	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "BackVol")	
WeightedBackVol	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "WeightedBackVol")	
VolDiff	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "VolDiff")	
PutCallRatio	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "PutCallRatio")	
CallVolumeIndex	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "CallVolumeIndex")	
PutVolumeIndex	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "PutVolumeIndex")	
OptionVolumeIndex	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "OptionVolumeIndex")	
FrontExpectedMove	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "FrontExpectedMove")	
BackExpectedMove	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "BackExpectedMove")	
ExpectedMoveDiff	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "ExpectedMoveDiff")	
Beta	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Beta")	
High52	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "High52")	
Low52	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Low52")	
PE	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "PE")	
EPS	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "EPS")	
MarketCap	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "MarketCap")	
Shares	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "Shares")	
DividendYield	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "DividendYield")	
DividendShare	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "DividendShare")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mysql", "quotes_tos", [Symbol], "RTD_LastMessage")	

# RealTimeToExcel Views for Interactive Brokers Trader Workstation

## Preconfigured Views

SQL Server and SQL Server Compact	MySQL, MariaDB, and PostgreSQL	Oracle Database, IBM DB2, and Nuodb
OptionDayHistoryTWS	option_day_history_tws	OPTION_DAY_HISTORY_TWS
OptionsTWS	options_tws	OPTIONS_TWS
QuoteDayHistoryTWS	quote_day_history_tws	QUOTE_DAY_HISTORY_TWS
QuotesTWS	quotes_tws	QUOTES_TWS

\* Click on the view name to go to the view description.

## Real-Time Views for Microsoft SQL Server and Microsoft SQL Server Compact

### OptionDayHistoryTWS

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(,)</a> <a href="#">Transposed</a> <a href="#">Transposed(,)</a>
Code		
Date		
Time	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Time")	
Last	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Last")	
LastSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "LastSize")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "AskSize")	
High	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "High")	
Low	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Low")	
Close	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Volume")	
UnderlyingPrice	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "UnderlyingPrice")	
ModelPrice	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "ModelPrice")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "ImpliedVol")	
BidImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "BidImpliedVol")	
AskImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "AskImpliedVol")	
LastImpliedVol	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "LastImpliedVol")	
BidDelta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "BidDelta")	
AskDelta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "AskDelta")	
LastDelta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "LastDelta")	
Delta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Delta")	
Gamma	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Gamma")	
Theta	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Theta")	
Vega	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "Vega")	
pvDividend	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "pvDividend")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "OptionDayHistoryTWS", [Code], [Date], "RTD_LastMessage")	

## OptionsTWS

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(,)</u> <u>Transposed</u> <u>Transposed(,)</u>
Code		
Date	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Date")	
Time	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Time")	
Last	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Last")	
LastSize	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"LastSize")	
Bid	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Bid")	
Ask	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Ask")	
BidSize	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"BidSize")	
AskSize	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"AskSize")	
High	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"High")	
Low	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Low")	
Close	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Close")	
Volume	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Volume")	
UnderlyingPrice	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"UnderlyingPrice")	
ModelPrice	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"ModelPrice")	
ImpliedVol	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"ImpliedVol")	
BidImpliedVol	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"BidImpliedVol")	
AskImpliedVol	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"AskImpliedVol")	
LastImpliedVol	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"LastImpliedVol")	
BidDelta	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"BidDelta")	
AskDelta	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"AskDelta")	
LastDelta	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"LastDelta")	
Delta	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Delta")	
Gamma	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Gamma")	
Theta	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Theta")	
Vega	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"Vega")	
pvDividend	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"pvDividend")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","OptionsTWS",[Code],"RTD_LastMessage")	

## QuoteDayHistoryTWS

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date		
Time	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"Time")	
Last	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"Last")	
LastSize	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"LastSize")	
Bid	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"Bid")	
Ask	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"Ask")	
BidSize	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"BidSize")	
AskSize	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"AskSize")	
High	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"Low")	
Close	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"Close")	
Volume	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"Volume")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","QuoteDayHistoryTWS",[Symbol],[Date],"RTD_LastMessage")	

## QuotesTWS

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Symbol		
Date	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"Date")	
Time	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"Time")	
Last	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"Last")	
LastSize	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"LastSize")	
Bid	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"Bid")	
Ask	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"Ask")	
BidSize	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"BidSize")	
AskSize	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"AskSize")	
High	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"Low")	
Close	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"Close")	
Volume	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"Volume")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mssql","QuotesTWS",[Symbol],"RTD_LastMessage")	

## option\_day\_history\_tws

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Code		
Date		
Time	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Time")	
Last	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Last")	
LastSize	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "LastSize")	
Bid	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "AskSize")	
High	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "High")	
Low	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Low")	
Close	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Volume")	
UnderlyingPrice	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "UnderlyingPrice")	
ModelPrice	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "ModelPrice")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "ImpliedVol")	
BidImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "BidImpliedVol")	
AskImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "AskImpliedVol")	
LastImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "LastImpliedVol")	
BidDelta	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "BidDelta")	
AskDelta	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "AskDelta")	
LastDelta	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "LastDelta")	
Delta	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Delta")	
Gamma	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Gamma")	
Theta	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Theta")	
Vega	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "Vega")	
pvDividend	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "pvDividend")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mysql", "option_day_history_tws", [Code], [Date], "RTD_LastMessage")	

## options\_tws

COLUMN_NAME	EXCEL FORMULA	Copy Copy(:) Transposed Transposed(:)
Code		
Date	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Date")	
Time	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Time")	
Last	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Last")	
LastSize	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "LastSize")	
Bid	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "AskSize")	
High	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "High")	
Low	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Low")	
Close	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Close")	
Volume	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Volume")	
UnderlyingPrice	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "UnderlyingPrice")	
ModelPrice	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "ModelPrice")	
ImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "ImpliedVol")	
BidImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "BidImpliedVol")	
AskImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "AskImpliedVol")	
LastImpliedVol	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "LastImpliedVol")	
BidDelta	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "BidDelta")	
AskDelta	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "AskDelta")	
LastDelta	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "LastDelta")	
Delta	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Delta")	
Gamma	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Gamma")	
Theta	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Theta")	
Vega	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "Vega")	
pvDividend	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "pvDividend")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "options_tws", [Code], "LastUpdateTimeStamp")	

RTD_LastMessage	=RTD("gartle.rtd","rtd-mysql","options_tws",[Code],"RTD_LastMessage")
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## quote\_day\_history\_tws

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(:)</u> <u>Transposed</u> <u>Transposed(:)</u>
Symbol		
Date		
Time	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"Time")	
Last	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"Last")	
LastSize	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"LastSize")	
Bid	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"Bid")	
Ask	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"Ask")	
BidSize	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"BidSize")	
AskSize	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"AskSize")	
High	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"Low")	
Close	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"Close")	
Volume	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"Volume")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mysql","quote_day_history_tws",[Symbol],[Date],"RTD_LastMessage")	

## quotes\_tws

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(:)</u> <u>Transposed</u> <u>Transposed(:)</u>
Symbol		
Date	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"Date")	
Time	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"Time")	
Last	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"Last")	
LastSize	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"LastSize")	
Bid	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"Bid")	
Ask	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"Ask")	
BidSize	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"BidSize")	
AskSize	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"AskSize")	
High	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"High")	
Low	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"Low")	
Close	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"Close")	
Volume	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"Volume")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mysql","quotes_tws",[Symbol],"RTD_LastMessage")	

# RealTimeToExcel Views for eSignal FutureSource

## Preconfigured Views

SQL Server and SQL Server Compact	MySQL, MariaDB, and PostgreSQL	Oracle Database, IBM DB2, and Nuodb
QuoteDayHistoryES	quote_day_history_es	QUOTE_DAY_HISTORY_ES
QuotesES	quotes_es	QUOTES_ES

\* Click on the view name to go to the view description.

## Real-Time Views for Microsoft SQL Server and Microsoft SQL Server Compact

### QuoteDayHistoryES

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(:)</a> <a href="#">Transposed</a> <a href="#">Transposed(:)</a>
Symbol		
Date		
Time	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "Time")	
Last	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "Last")	
Change	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "PercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "AskSize")	
Open	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "Open")	
High	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "High")	
Low	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "Low")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "OpenInt")	
TradePrice	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "TradePrice")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "QuoteDayHistoryES", [Symbol], [Date], "RTD_LastMessage")	

### QuotesES

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(:)</a> <a href="#">Transposed</a> <a href="#">Transposed(:)</a>
Symbol		
Date	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "Date")	
Time	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "Time")	
Last	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "PercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "AskSize")	
Open	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "Open")	
High	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "High")	
Low	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "Low")	
Volume	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "OpenInt")	
TradePrice	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "TradePrice")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mssql", "QuotesES", [Symbol], "RTD_LastMessage")	

## quote\_day\_history\_es

COLUMN_NAME	EXCEL FORMULA	<u>Copy Copy(:) Transposed Transposed(:)</u>
Symbol		
Date		
Time	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "Time")	
Last	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "Last")	
Change	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "PercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "AskSize")	
Open	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "Open")	
High	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "High")	
Low	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "Low")	
Volume	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "OpenInt")	
TradePrice	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "TradePrice")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mysql", "quote_day_history_es", [Symbol], [Date], "RTD_LastMessage")	

## quotes\_es

COLUMN_NAME	EXCEL FORMULA	<u>Copy Copy(:) Transposed Transposed(:)</u>
Symbol		
Date	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "Date")	
Time	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "Time")	
Last	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "Last")	
Change	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "Change")	
PercentChange	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "PercentChange")	
Bid	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "Bid")	
Ask	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "Ask")	
BidSize	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "BidSize")	
AskSize	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "AskSize")	
Open	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "Open")	
High	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "High")	
Low	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "Low")	
Volume	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "Volume")	
OpenInt	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "OpenInt")	
TradePrice	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "TradePrice")	
LastUpdateTimeStamp	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd", "rtd-mysql", "quotes_es", [Symbol], "RTD_LastMessage")	



# RealTimeToExcel Views for VertexFX Trader

## Preconfigured Views

SQL Server and SQL Server Compact	MySQL, MariaDB, and PostgreSQL	Oracle Database, IBM DB2, and Nuodb
QuoteDayHistoryVFX	quote_day_history_vfx	QUOTE_DAY_HISTORY_VFX
QuotesVFX	quotes_vfx	QUOTES_VFX

\* Click on the view name to go to the view description.

## Real-Time Views for Microsoft SQL Server and Microsoft SQL Server Compact

### QuoteDayHistoryVFX

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(;) Transposed</a> <a href="#">Transposed(;)</a>
Symbol		
Date		
Time	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"Time")	
Bid	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"Bid")	
Ask	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"Ask")	
Open	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"Low")	
Close	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"Close")	
Change	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"PercentChange")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mssql","QuoteDayHistoryVFX",[Symbol],[Date],"RTD_LastMessage")	

### QuotesVFX

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(;) Transposed</a> <a href="#">Transposed(;)</a>
Symbol		
Date	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"Date")	
Time	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"Time")	
Bid	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"Bid")	
Ask	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"Ask")	
Open	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"Open")	
High	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"High")	
Low	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"Low")	
Close	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"Close")	
Change	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"PercentChange")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mssql","QuotesVFX",[Symbol],"RTD_LastMessage")	

## Real-Time Views for MySQL, MariaDB, Oracle Database, IBM DB2, Nuodb, and PostgreSQL

### quote\_day\_history\_vfx

COLUMN_NAME	EXCEL FORMULA	<a href="#">Copy</a> <a href="#">Copy(;) Transposed</a> <a href="#">Transposed(;)</a>
Symbol		
Date		
Time	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"Time")	
Bid	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"Bid")	
Ask	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"Ask")	
Open	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"Open")	
High	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"High")	
Low	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"Low")	
Close	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"Close")	
Change	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"Change")	
PercentChange	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"PercentChange")	
LastUpdateTimeStamp	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd","rtd-mysql","quote_day_history_vfx",[Symbol],[Date],"RTD_LastMessage")	

## quotes\_vfx

COLUMN_NAME	EXCEL FORMULA	<u>Copy</u> <u>Copy(:)</u> <u>Transposed</u> <u>Transposed(:)</u>
Symbol		
Date	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"Date")	
Time	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"Time")	
Bid	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"Bid")	
Ask	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"Ask")	
Open	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"Open")	
High	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"High")	
Low	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"Low")	
Close	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"Close")	
Change	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"Change")	
PercentChange	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"PercentChange")	
LastUpdateTimeStamp	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"LastUpdateTimeStamp")	
RTD_LastMessage	=RTD("gartle.rtd",,"rtd-mysql","quotes_vfx",[Symbol],"RTD_LastMessage")	

## Technical Support

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You may download the latest releases at [www.stock-data-solutions.com](http://www.stock-data-solutions.com).

You may contact us via email [support@stock-data-solutions.com](mailto:support@stock-data-solutions.com).

See also [Frequently Asked Questions](#).

We recommend you to subscribe to the **RealTimeToDB Tips and Tricks** newsletter.

Just send an email to [realtimetodb\\_tips\\_and\\_tricks@getresponse.com](mailto:realtimetodb_tips_and_tricks@getresponse.com).

You may unsubscribe at any time.

## Frequently Asked Questions

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### **RealTimeToDB can't connect to my RTD server.**

Try to use the RealTimeToDB version of the same bitness as your RTD server.