

Quotestream RTD (Real-Time Data)

How to Use RTD?

Data Point Coverage

Data Point Format

System Requirements

Troubleshooting

Frequently-Asked Questions (FAQ)

Quotestream's RTD functionality allows you to stream dynamic, real-time quote data to MS Excel spreadsheets in the Windows operating system.

This powerful tool greatly extends your control, whether you simply prefer to view live market data in a spreadsheet, or wish to perform specialized calculations and use specific Excel features such as charting, data aggregation, conditional formatting, macros, etc. As data updates in Quotestream, the same data updates accordingly in your spreadsheet, embedded in streaming real time.

With Quotestream RTD, you can track a wide range of stock market statistics, from basic stock quote data (last price, volume, change, bid, ask) to price statistics (52-week high, 52-week low) and valuation parameters (earnings per share, PE ratios, dividend yields). Data for up to 500 symbols is supported.

Having troubles connecting to the service?

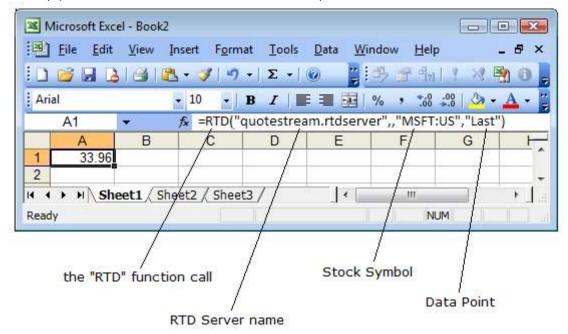
Please see further on in this document for trouble shooting tips.



How to use RTD?

Using Quotestream RTD is easy. After logging on to Quotestream, open a new Excel workbook and enter an RTD function as follows:

=RTD("quotestream.rtdserver",,"MSFT:US","Last")



There are 4 parts to an RTD function:

- 1. RTD Function Call this is how Excel knows that you are calling an RTD function.
- 2. RTD Server Name the name of the RTD server where the function gets processed. In this case, the value is always "quotestream.rtdserver".
- 3. Stock Symbol a symbol of a stock or other financial instrument.

Note: Symbols containing an @ (ie - options symbols) must be escaped with a single quote. For example, @APVIN needs to be entered into Excel as '@APVIN

4. Data Point – the data point you wish to request (see "Data Points" further on in this document).

Note the two commas that come after the RTD server name and the single comma that comes after the stock symbol.

You can build your RTD spreadsheets from scratch by manually inputting RTD functions to an Excel spreadsheet. Alternatively, you can simply use one of several pre-defined RTD Excel spreadsheets we can provide for you, and customize it to your needs.

You can download **Sample RTD Excel Spreadsheets** from this web page:

http://www.guotestreampro.com/RTDdocs



Data Point Coverage

Quotestream DDE supports the following data points:

Last Price	Volume	Close Price	Currency
Change	Trade Value	Open Price	Dividend
Percent Change	VWAP	52 Week High	Yield
Bid Price	Last Trade Time	52 Week Low	Ex-Div
Bid Size	Last Trade Size	52 Week High Date	Earnings Per Share
Ask Price	High	52 Week Low Date	PE Ratio
Ask Size	Low	Previous Close	P/B Ratio
TRIV (TSX Indices)	Marketplace	TWAP	Shares Outstanding
Symbol	Tick	Description	Market Cap
Average Volume 10 Day	Tick Volume	Pre Market Last	Exchange
Average Volume 20 Day	Performance 3 Month	Pre Market Change	Post Market Last
Average Volume 30 Day	Performance 1 Month	Pre Market Percent Change	Post Market Change
Average Volume 50 Day	Performance 6 Month	Post Market Percent Change	Pre Market Volume
Average Volume 90 Day	Performance 1 Year	Pre Market Trade Time	Post Market Volume
Average Volume 100 Day	Sector	Post Market Trade Time	Industry
Average Volume 365 Day	Alpha	Beta	R-Squared
Standard Deviation	YTD%	Short Sale Restriction	SubIndustry
Performance 3 Year	Performance 3 Year	Performance 5 Year	Performance 5 Year
Annualized	Cumulative	Annualized	Cumulative
Performance 10 Year	Performance 10 Year	Implied Volatility	Implied Volatility
Annualized	Cumulative		Change
21 Day Moving Average	50 Day Moving Average	200 Day Moving Average	Open Interest
Mark	Previous Mark	Mark Change Percent	Mark Change
Intrinsic Value	Extrinsic Value	Bid Implied Volatility	Ask Implied
			Volatility
Delta	Gamma	Theta	Vega
Rho	Enterprise Value	Return on Capital	Return on Equity
Return on Assets LTM	Return on Capital LTM	Return on Equity LTM	Return on Assets
Return on Invested Capital	Return on Invested	Post	Panel
QTR	Capital 1YR		
Firm Name	Next Earnings Date	Earnings Quarter End	

Data Points

Data Points are available in long or short form for your convenience. Either may be used.

For example:

- =RTD("quotestream";"MSFT:US";"Last Trade Time")
- ... will return the same result as...
- =RTD("quotestream";"MSFT:US";"LTime")



Long Name	Short Name	Long Name	Short Name
Symbol	Symbol	Description	Desc
Last Price	Last	Change	Chg
Percent Change	PChg	Last Trade Time	Ltime
Last Trade Size	LSize	Bid Price	Bid
Ask Price	Ask	Ask Size	Asize
Bid Size	Bsize	Open Interest	Int
Volume	Vol	52 Week High	52wHi
Yield	Yld	52 Week Low	52wLo
Dividend	Div	Ex-Div	ExD
Earnings Per Share	EPS	PE Ratio	PER
P/B Ratio	PBRAT	Exchange	Exch
Marketplace	Market	Currency	Curr
Tick	Tick	Low	Lo
Open Price	Open	High	Hi
Previous Close	Pclose	Close Price	Close
TRIV	TRIV	Shares Outstanding	SHOS
Market Cap	MCap	Volume Weight Average Price	VWAP
TWAP	TWAP	Pre Market Last	PreLast
Pre Market Change	PreChg	Pre Market Percent Change	PrePChg
Pre Market Volume	PreVol	Pre Market Trade Time	PreLtime
Post Market last	Post Last	Post Market Change	PostChg
Post Market Percent Change	PostPChg	Post Market Volume	PostVol
Post Market Trade Time	PostLTime	Value	Val
TICKVOLUME	Tvol	Performance 1 Month	P1M
Performance 3 Month	P3M	Performance 6 Month	P6M
Performance 1 Year	P1Y	Mark	Mark
Previous Mark	PMark	AVERAGE VOLUME 10 DAY	AV10D
AVERAGE VOLUME 20 DAY	AV20D	AVERAGE VOLUME 30 DAY	AV30D
AVERAGE VOLUME 50 DAY	AV50D	AVERAGE VOLUME 90 DAY	AV90D
AVERAGE VOLUME 100 DAY	AV100D	AVERAGE VOLUME 365 DAY	AV365D
52 Week High Date	52wHiD	52 Week Low Date	52wLoD
Sector	SCT	Industry	IND
SubIndustry	IND2	Alpha	Alpha
Beta	Beta	R-Squared	R2
Standard Deviation	Stddev	YTD%	YTD%
Performance 3 Year Annualized	P3YA	Performance 3 Year Cumulative	P3YC
Performance 5 Year Annualized	P5YA	Performance 5 Year Cumulative	P5YC
Performance 10 Year Annualized	P10YA	Performance 10 Year Cumulative	P10YC
Short Sale Restriction	regSHO	21 Day Moving Average	MA21
50 Day Moving Average	MA50	200 Day Moving Average	MA200
Enterprise Value	EV	Return on Capital	ROC
Return on Equity	ROE	Return on Assets	ROA
Return on Capital LTM	ROCLTM	Return on Equity LTM	ROELTM
Return on Assets LTM	ROALTM	Return on Invested Capital QTR	ROICQTR
Return on Invested Capital 1YR	ROIC1YR	Post	Post
Panel	Panel	Firm Name	Firm Name
Next Earnings Date	NextEarnDate	Earnings Quarter End	EarnQuartEn



System Requirements

RTD requires a Windows machine with MS Excel 2002 or higher.

QuoteMedia's Quotestream RTD feature implementation takes advantage of the RTD (formerly DDE, "Dynamic Data Exchange"), and OLE ("Object Linking and Embedding") compound document standards developed by Microsoft Corporation, for MS Excel. These standards allow the creation of objects in one application to be linked or embedded in a second application. Embedded objects retain their original format and links to the application that created them.

These Microsoft standards are available only in Excel 2002 and higher. Consequently, Quotestream RTD is supported only in these Excel versions.

Trouble Shooting

If you are having trouble connecting to the service, please start by trying the following steps:

Step 1

The Operating System, the version of QuoteStream and the version of Microsoft Excel MUST all be either 32-bit or 64-bit. You cannot mismatch a 64-bit QuoteStream with a 32-bit Microsoft Excel and vice versa. If using the Webstart Installer then Java must match Excel, so 32-bit Java for 32-bit Microsoft Excel. Supported version of RTD vs Office include:

```
32-bit OS + 32-bit Java + 32-bit Office
64-bit OS + 32-bit Java + 32-bit Office
64-bit OS + 64-bit Java + 64-bit Office
```

To ensure that 32-bit Java is set on your computer click here

Step 2

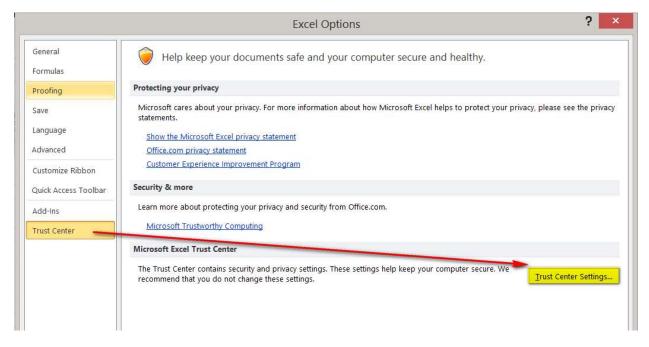
Ensure that all Excel sheets and the Excel program are closed first; only open Excel after Quotestream has been opened.

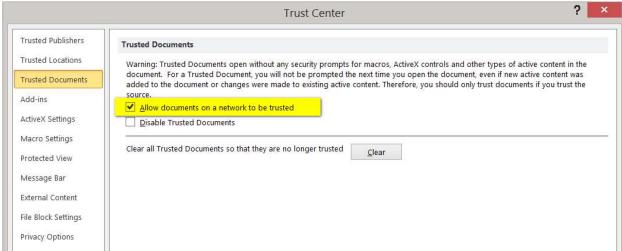
Step 3

Allow permissions to Excel and Java through your firewall, possibly both public and private depending on where you are accessing the application from. Both a Windows and a third party firewall service should be adjusted to allow Excel and Java access.

Set trusted application settings in Excel if not automatically done. File > Options > Trust Center > Trust Center Settings...> Under Trusted Documents, ensure "Allow documents on a network to be trusted?" is selected.



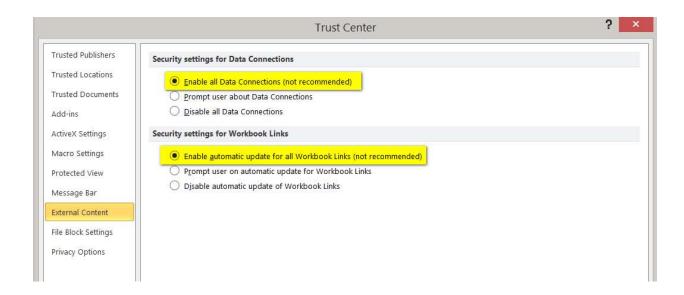




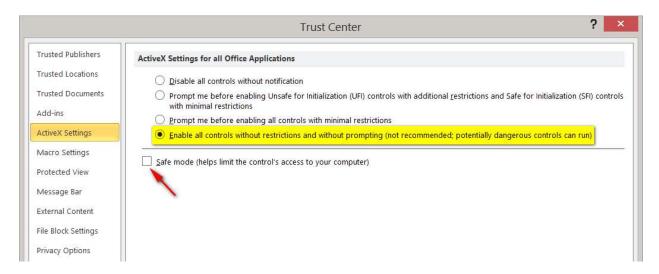
For Win7 users: Under Trust Center Settings > Locations, select "Add new location" then select "The Sub-Folders of this location are Trusted" > click Browse and locate the following folder to add: C:\ProgramData\QuoteMedia\resources\nativelibs

For Win8 and Win10 users: Under Trust Center Settings > External Content, select > Enable all Data Connections – and > Enable automatic update for all Workbook links

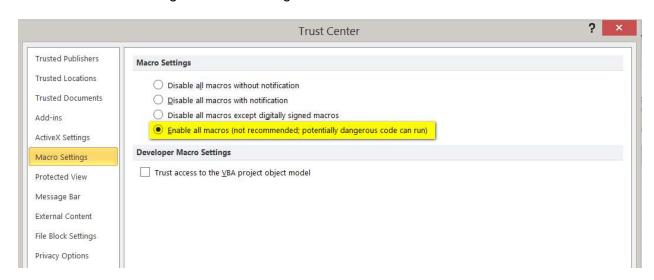




Under Trust Center Settings > ActiveX Settings > Select "Enable all Data" and "Enable automativ update for all Workbook links"



Under Trust Center Settings > Macro Settings > Select "Enable all Macros"





Step 4

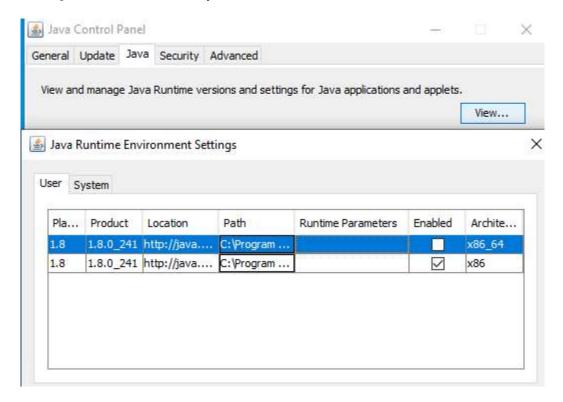
Update Java and clear Java cache: https://www.java.com/en/download/help/plugin_cache.xml

Step 5

Update Windows User Control Settings; lowering controls to "Never Notify" has solved problems in the past. http://windows.microsoft.com/en-ca/windows7/how-do-i-change-the-behavior-of-user-account-control-by-using-the-slider

Step 6 (Not Applicable for Desktop version of Quotestream)

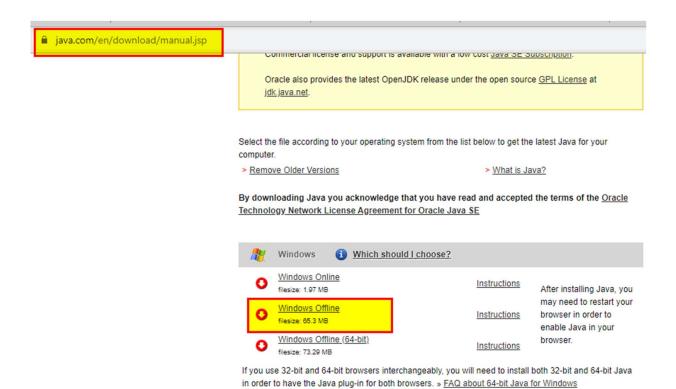
Ensure that Java is running in the appropriate bit version to your version of Quotestream and Microsoft Excel. It is possible to have the 32-bit and 64-bit versions of Java on your computer at the same time and your computer may choose to use the version 64-bit of Java even though you are running the 32-bit version of Quotestream and Microsoft Excel. First confirm which versions of Java that you have by going into 'Configure Java' which you can type into your Windows search area, or finding in the 'Java' folder in your Start Menu.



First, click on the 'Java' tab up at the top and then on the 'View' button to the right as shown in the picture above. You can tell the bit version of Java that you have by looking in the very far right column under Architecture, the 'x86_64' is the 64-bit version while the 'x86' version is the 32-bit version.

If you are missing the need bit version of Java then you can download it from this website: https://www.java.com/en/download/manual.jsp





Highlighted in the picture above is the 32-bit Java version, so select that one if it is the one you are missing or select the one below is for the 64-bit Java version. Then after you download and install it, you can bring up the Configure Java program again and this time select the correct bit version of Java you want to have running.

Frequently-Asked Questions (FAQ)

• What do I need to install to use RTD?

You do not need to install any additional software. All you have to do is log on to Quotestream. Quotestream does all the setup and configuration for you in the background.

• The quotes appearing on the Excel spreadsheets seem to update only every two seconds – how can I get the spreadsheet to update faster?

Excel RTD is set to update every 2 seconds by default. This is called the Throttle Interval. You can change the default Throttle Interval in Excel by going to *Tools ® Macro ® Visual Basic Editor*. From the *Visual Basic Editor*, go to *View ® Immediate Window*. On the *Immediate Window*, type in

Application.RTD.ThrottleInterval=0

and press Enter. Setting the Throttle Interval to 0 means that the spreadsheet is refreshed as soon as there are updates.

Click here for more information on the Throttle Interval.



I am getting #N/A when I open my RTD spreadsheet, what should I do?

Check that you are properly logged on and getting streaming data on Quotestream.

If you are using Windows, see "For Windows Users" section of this document.

• I am getting Invalid Field: OUTPUTNAME when I try a new data output that was mentioned in the latest release, why is that?

The Quotestream Desktop Installer is not updated as frequently as the Webstart Installer. If you want the latest updates to take effect in Quotestream then you will need to use the Webstart Installer version of Quotestream instead, which is available here: https://quotestream.com/download/ Note that you will have to ensure that your version of Java matches the same 32 or 64-bit versions of your Microsoft Excel.

