

# **QUOTE***STREAM*<sup>TM</sup>

## **Quotestream RTD (Real-Time Data)**

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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.

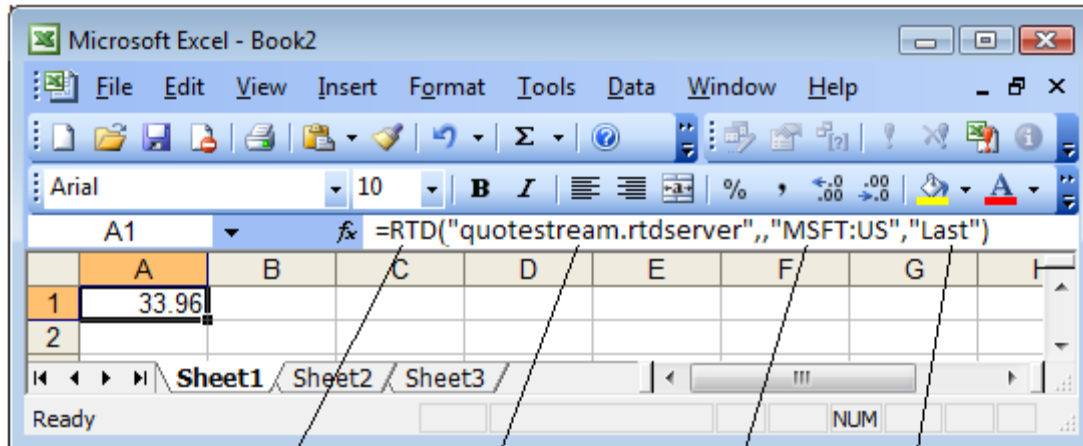
**Having troubles connecting to the service?**

**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")
```



the "RTD" function call

Stock Symbol

Data Point

RTD Server name

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:

## Data Point Coverage

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

**For example:** =RTD("quotestream.rtdserver",,"MSFT:US","Last Trade Time") will return the same result as  
=RTD("quotestream.rtdserver",,"MSFT:US","Ltime")

Long Name	Short Name
Last Price	Last
Change	Chg
Percent Change	PChg
Tick	Tick
Last Trade Time	Ltime
Last Trade Size	LSize
Bid Price	Bid
Bid Size	Bsize
Ask Price	Ask
Ask Size	Asize
Open Price	Open
High	Hi
Low	Lo
52 Week High	52wHi
52 Week High Date	52wHiD
52 Week Low	52wLo
52 Week Low Date	52wLoD
Value	Val
Close Price	Close
Previous Close	Pclose
Volume	Vol
VWAP	VWAP
TWAP	TWAP
Tick Volume	Tvol
Open Interest	OpenInt
YTD	YTD
YTD%	YTD%
21 Day Moving Average	MA21
50 Day Moving Average	MA50
200 Day Moving Average	MA200

Long Name	Short Name
Performance 1 Month	P1M
Performance 1 Month Percent	P1M%
Performance 3 Month	P3M
Performance 3 Month Percent	P3M%
Performance 6 Month	P6M
Performance 6 Month Percent	P6M%
Performance 1 Year	P1Y
Performance 1 Year Percent	P1Y%
Performance 3 Year Cumulative	P3YC
Performance 3 Year Annualized	P3YA
Performance 5 Year Cumulative	P5YC
Performance 5 Year Annualized	P5YA
Performance 10 Year Cumulative	P10YC
Performance 10 Year Annualized	P10YA
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
Pre Market Last	PreLast
Pre Market Change	PreChg
Pre Market Percent Change	PrePChg
Pre Market Volume	PreVol
Pre Market Trade Time	PreLtime
Post	Post
Post Market Last	Post Last
Post Market Change	PostChg
Post Market Percent Change	PostPChg
Post Market Volume	PostVol
Post Market Trade Time	PostLTime

Long Name	Short Name
Standard Deviation	Stddev
Alpha	Alpha
Beta	Beta
Gamma	Gamma
Rho	Rho
Theta	Theta
Vega	Vega
Delta	Delta
R-Squared	R2
Intrinsic Value	Intrinsic
Extrinsic Value	Extrinsic
Bid Implied Volatility	BidIV
Ask Implied Volatility	AskIV
Implied Volatility	IV
Implied Volatility Change	IVChg
Mark	Mark
Mark Change	MarkChg
Mark Change Percent	MarkChg%
Previous Mark	PMark
Market Cap	MCap
Dividend	Div
Ex-Div	ExD
Dividend Current Payout Ratio	DivPayout
Yield	Yld
Earnings Per Share	EPS
Earnings Quarter End	EarnQuartEnd
Next Earnings Date	NextEarnDate
ShortInterestRatio	ShortRatio
ShortPosition	Short
ShortPositionChange	ShortChg
ShortPositionPercentChange	ShortPChg
Panel	Panel

Long Name	Short Name
Return on Assets	ROA
Return on Assets LTM	ROALTM
Return on Capital	ROC
Return on Capital LTM	ROCLTM
Return on Equity	ROE
Return on Equity LTM	ROELTM
Return on Invested Capital 1YR	ROIC1YR
Return on Invested Capital QTR	ROICQTR
P/B Ratio	PBRAT
PE Ratio	PER
Enterprise Value	EV
Symbol	Symbol
Description	Desc
Firm Name	Firm Name
Currency	Curr
Marketplace	Market
Exchange	Exch
Industry	IND
SubIndustry	IND2
Sector	SCT
Shares Outstanding	SHOS
TRIV	TRIV
Short Sale Restriction	regSHO
Short Interest Avg Daily Volume	AvgDaily
Short Interest Settlement Date	SettleDay
Performance 1 Month	P1M
Performance 1 Month Percent	P1M%
Performance 3 Month	P3M
Performance 3 Month Percent	P3M%
Performance 6 Month	P6M
Performance 6 Month Percent	P6M%
Performance 1 Year	P1Y
Performance 1 Year Percent	P1Y%

## System Requirements

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

QuoteMedia's Quotestream RTD feature takes advantage of the RTD (formerly DDE, "Dynamic Data Exchange"), and OLE ("Object Linking and Embedding") 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](#)

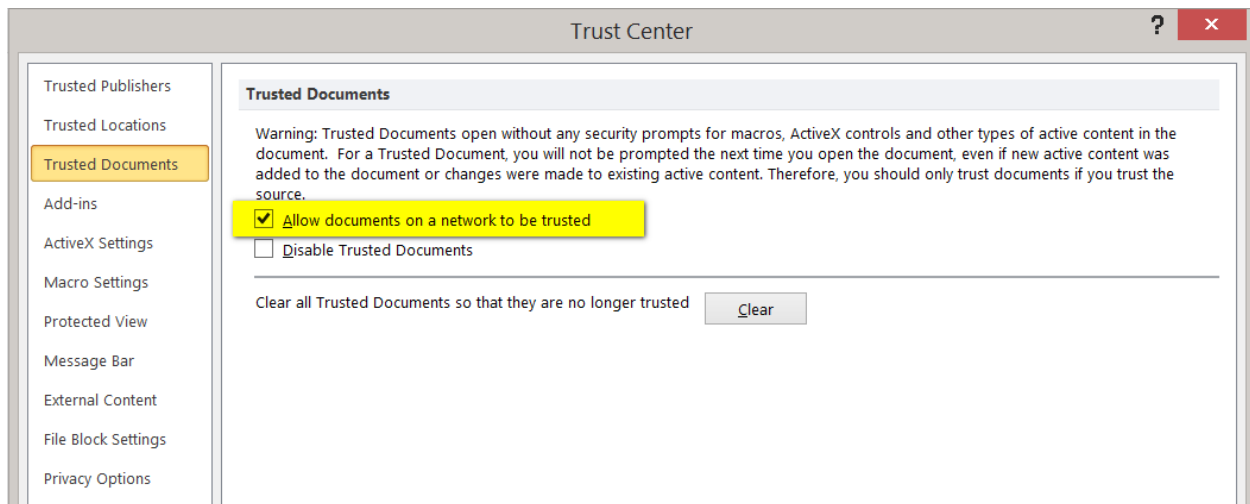
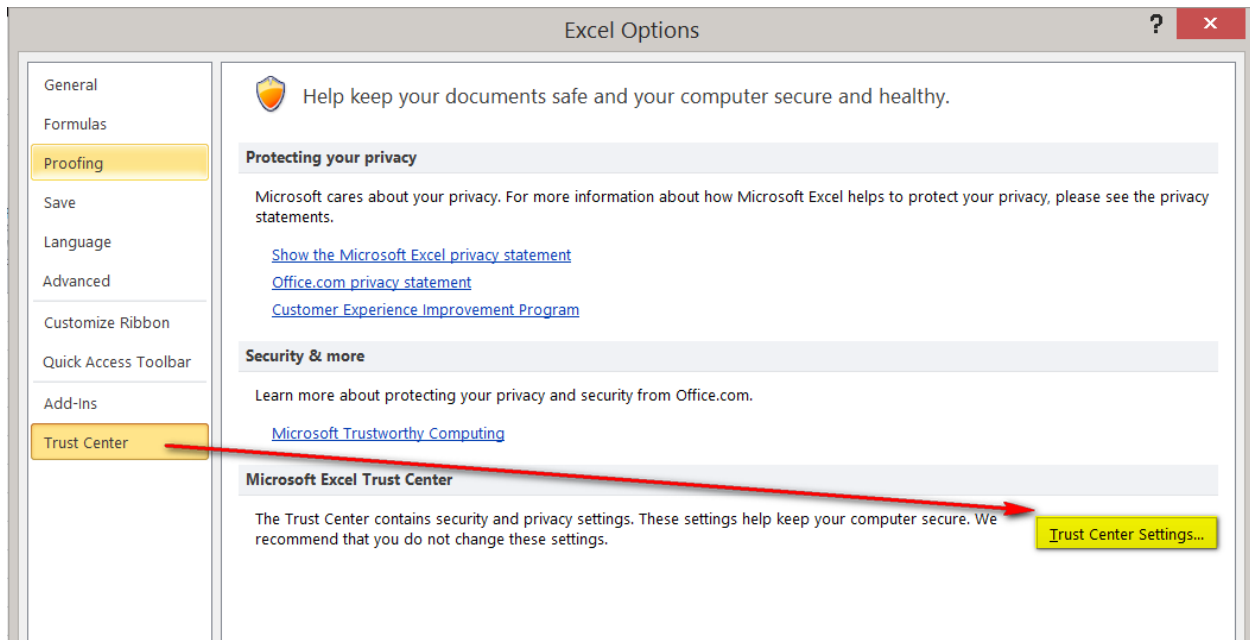
### Step 2

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

### Step 3

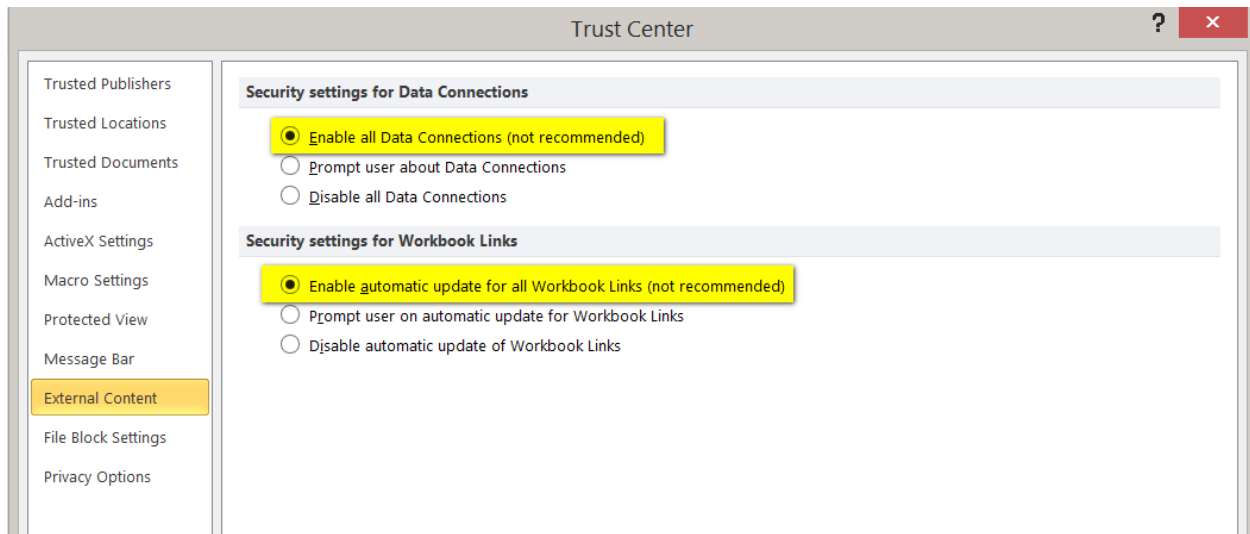
Allow permissions to Excel and Java through your firewall, possibly both public and private depending on where you are accessing the application from. Both a Windows and a third party firewall service should be adjusted to allow Excel and Java access.

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.

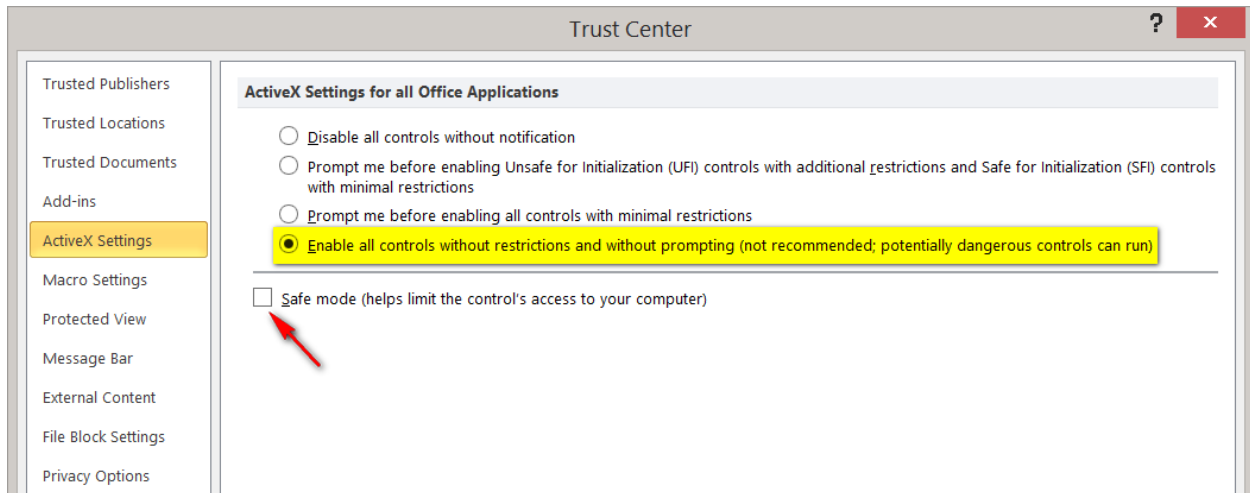


For Win7 users: Under Trust Center Settings > Locations, select "Add new location" then select "The Sub - Folders of this location are Trusted" > click Browse and locate the following folder to add:  
C:\ProgramData\QuoteMedia\resources\nativelibs

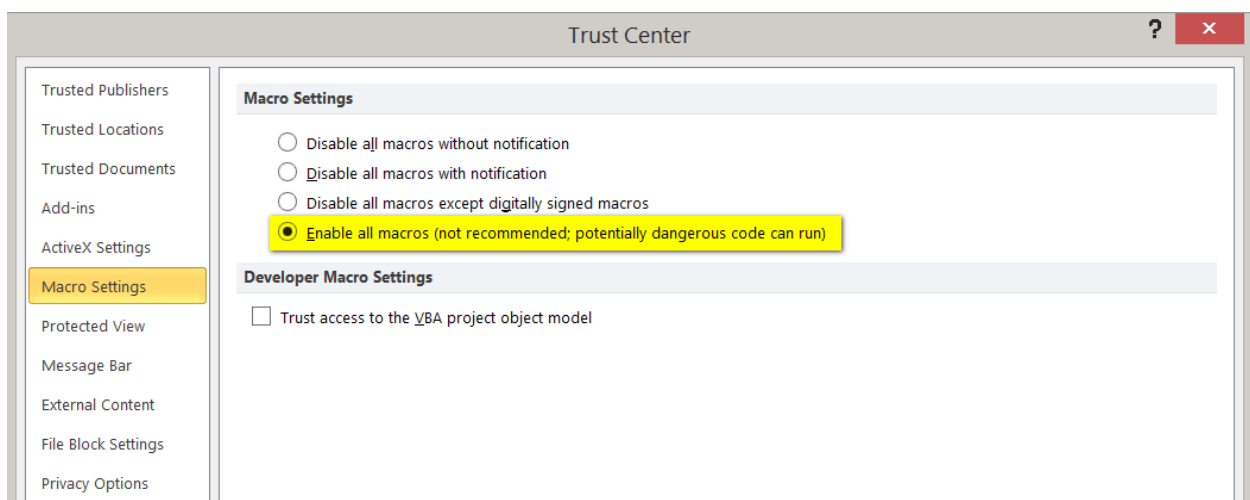
For Win8 and Win10 users: Under Trust Center Settings > External Content, select > Enable all Data Connections – and > Enable automatic update for all Workbook links



Under Trust Center Settings > ActiveX Settings > Select “Enable all Data” and “Enable automatic update for all Workbook links”



Under Trust Center Settings > Macro Settings > Select “Enable all Macros”



#### Step 4

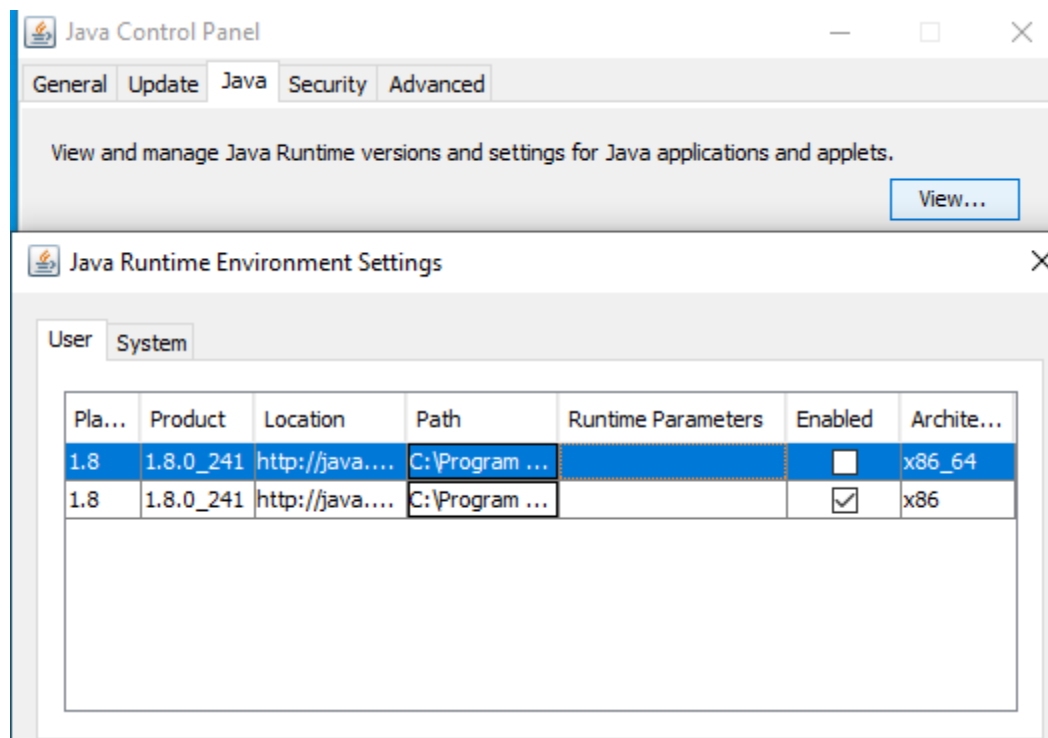
Update Java and clear Java cache: [https://www.java.com/en/download/help/plugin\\_cache.xml](https://www.java.com/en/download/help/plugin_cache.xml)

#### 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 bit version of Java then you can download it from this website: <https://www.java.com/en/download/manual.jsp>

java.com/en/download/manual.jsp

Commercial license and support is available with a low cost [Java SE Subscription](#).




Oracle also provides the latest OpenJDK release under the open source [GPL License](#) at [jdk.java.net](#).

Select the file according to your operating system from the list below to get the latest Java for your computer.

> [Remove Older Versions](#) > [What is Java?](#)

By downloading Java you acknowledge that you have read and accepted the terms of the [Oracle Technology Network License Agreement for Oracle Java SE](#)

Windows [Which should I choose?](#)

 <a href="#">Windows Online</a> filesize: 1.97 MB	<a href="#">Instructions</a>	After installing Java, you may need to restart your browser in order to enable Java in your browser.
 <a href="#">Windows Offline</a> filesize: 65.3 MB	<a href="#">Instructions</a>	
 <a href="#">Windows Offline (64-bit)</a> filesize: 73.29 MB	<a href="#">Instructions</a>	

If you use 32-bit and 64-bit browsers interchangeably, you will need to install both 32-bit and 64-bit Java in order to have the Java plug-in for both browsers. » [FAQ about 64-bit Java for Windows](#)

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, which 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.