
Slingshot Real Time Data Server for Excel Version 2002 (OfficeXP) User Guide

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TABLE OF CONTENTS

1 INTRODUCTION.....	2
1.1 Installation Instructions.....	2
2 USER INSTRUCTIONS.....	4
2.1 Log.....	4
2.2 Requests.....	4
2.3 Inserts.....	5
3 WDS AUTHENTICATION, PASSWORDS, PROXIES AND SSL.....	7
3.1 Additional Fields.....	7
3.2 Authentication ID.....	8
3.3 WDS Authorisation.....	8
3.4 SSL.....	8
3.5 Proxy.....	8
3.6 Authentication ID and Proxy.....	9
3.7 WDS Authorisation and Proxy.....	9
3.8 SSL and Proxy.....	9
4 IMPORTANT MISCELLANEOUS CHARACTERISITICS.....	10

1 INTRODUCTION

The Slingshot Real Time Data (RTD) server for Excel version 2002 included in MS OfficeXP allows you to contribute and request real time data using a spreadsheet. It uses Slingshot and a slingshot COM object to access real time data services. It is simple to install, uses minimal CPU resources and allows you to access Slingshot from any machine running the Slingshot WDS, even if passwords and proxies are in place. It also allows you to access your WDS via Secure Socket Layer (SSL).

The RTD server has been developed so that you can request and contribute over any number of connections from the same workbook. The RTD server is built to work with Microsoft Excel version 2002 (included in MS OfficeXP) and will not work with previous versions of Excel.

1.1 Installation Instructions

The following components must be registered before you can start requesting or inserting data:

SlingshotCom.dll	Interface between the RTD Server and Slingshot. It seamlessly provides a conduit for real time requests, updates and inserts and maintains all the connections you have included in your requests.
ExcelRTD.dll	Provides an interface into excel which allows real time updates to reach excel and also for data inserts to be contributed to your chosen data service.
MS Excel version 2002	The RTD server was developed for MS Excel version 2002 (included in MS OfficeXP) and will not work with previous versions
Swissrisk's Software's Slingshot	Slingshot and a WDS are required to access market data providers

Registering the DLLs

Complete the following process to register the dlls listed above:

1. Click on **Start** in the Task bar and select **Run** from the menu.
2. In the **Open** field, type **regsvr32** and the '**SlingshotCom.dll**' path. The window should resemble the picture below:



3. Click on **OK**. The following message should appear on your screen shortly after:



If this message does not appear, the dll has failed to register. Repeat the registration process.

4. Repeat steps 1 to 3 with '**ExcelRTD.dll**'.

The installation process is complete once you have registered both dlls.

2 USER INSTRUCTIONS

Once the dlls have been registered, you can begin to set up your workbook. You can set up a log function, request functions or insert functions.

2.1 Log

The RTD server contains a logging capability. You need to add a function to one of the cells in the workbook that you plan to use for requesting and/or inserting market data. It's recommended that you enter the following function into cell **A1** to ensure that all events are logged.

The function for Logging requires the following format:

```
=RTD("ExcelRTD.RTDFunctions",,"Log","True")
```

All the arguments between the brackets must be in quotes and separated by commas. An explanation of each field is listed below:

RTD	Tells Excel that you are using a Real Time Data dll.
"ExcelRTD.RTDFunctions"	Required for every formula you use. It tells Excel the name of the dll and the name of the RTD class.
,,	This field will always remain empty. It is provided for DCOM technology, which has not been implemented for this RTD server.
Log"	Indicates that you are entering a Log formula.
"True"	Indicates that you want to turn logging on. Entering false here will turn the log off .

The log, by default is turned off. If you do not ever require logging then you do not need to enter a function for logging.

In the example above, a path for the log file was not included. The default log file will be written to the directory where the excelRTD.dll is located. The default name is:

```
sslogs.txt
```

To enter a log file path, you must add a field to the formula above. It would appear as shown below:

```
=RTD("ExcelRTD.RTDFunctions",,"Log","True","d:\Test\TestLog.txt")
```

You can use absolute paths, as shown above, or relative paths to designate your log file.

2.2 Requests

The formula below selects the ask price for the Euro from Reuters:

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=", "22", "M", "R")
```

The fields in the above request function are explained below:

RTD	Tells Excel that you are using a Real Time Data dll.
"ExcelRTD.RTDFunctions"	Required for every formula you use. It tells Excel the name of the dll and the name of the RTD Class.
,""	This field will always remain empty. It is provided for DCOM technology, which has not been implemented for this RTD server.
"http:192.168.120.148:80"	The IP address of the machine running the Slingshot WDS. You can use the IP address or DNS name in this field. Do not forget to include the port number.
"Reuters"	The name of the data service. This must match the name of the service listed WDS.ini (See the Services line in the Invision section of the ini file).
"EUR="	The symbol Reuters defines for the Euro.
"22"	The fid number Reuters has designated for "Ask Price".
"M"	A Slingshot parameter required for all requests. "M" means monitor the Ask Price of the Euro and send me updates as they are received from Reuters. Also, you can use "S" , for snapshot, in this field. This will deliver the Ask price of the Euro but no further updates
"R"	Defines the function you have entered as a Request as opposed to an Insert.

After you enter a function into a cell, the requested data will appear, provided the Server and service are available. In this Beta version, The RTD Server will not cache requests made to Servers and/or Services that are not available when the initial request is made.

If updates have been received in Excel, requests have been recognised and a service interruption will not render your requests void. When the service becomes available again, Slingshot will remember your requests and deliver the data appropriately. Currently, there is no mechanism for defining stale values.

The example above is for a WDS with no security settings. If your WDS has security settings see WDS Authentication, Passwords, Proxies and SSL on [page 7](#).

2.3 Inserts

To contribute data to a data service you must use the function for an insert. An example insert of Ask Price for the Euro is shown below:

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=",
"22",".86","I")
```

The fields in the above Insert function are explained below :

RTD	Tells Excel that you are using the Real Time Data dll.
"ExcelRTD.RTDFunctions"	Required for every formula you use. It tells Excel the name of the dll and the main class in the dll to use.
,""	This field will always remain empty. It is provided for

	DCOM technology, which has not been implemented for this RTD server.
"http:192.168.120.148:80"	The IP address of the machine running the Slingshot WDS. You can use the IP address or DNS name in this field. Do not forget to include the port number.
"Reuters"	The name of the data service. This must match the name of the service listed WDS.ini (See the Services line in the Invision section of the ini file).
"EUR="	The symbol Reuters defines for the Euro.
"22"	The fid number Reuters has designated for "Ask Price".
".86"	The value you wish to contribute for the Euro Ask Price.
"I"	Defines the function you have entered as an Insert.

3 WDS AUTHENTICATION, PASSWORDS, PROXIES AND SSL

The WDS you are using may be configured to work with the items below either individually or in combination:

- An single Authentication ID
- A Username and password
- Secure Socket Layer (SSL)
- A Proxy Server

The RTD server allows you to enter the necessary information required for the items above. It demands that you provide a code ID that lets the RTD which of the above items have been configured into your WDS.

The codes you should use are shown below with an example of the additional fields required for each code. The code should be included in the seventh field in the function.

3.1 Additional Fields

The Table below defines the extra fields that might be required in the examples shown above:

"CodeID"	Identifies any configurable extras that exist in your WDS. Each function must include the extra strings required by the relevant code. The codes are listed below: <ol style="list-style-type: none"> 1. Authentication ID required. WDS Authorisation - Username and Password required. SSL certificate and Certificate Authority required. Proxy Url, UserID and Password required. Authentication ID and proxy information required. WDS Authorisation and proxy information required. Proxy and SSL information required
"AuthenticationID"	A key string that matches the authenticity key configured in your WDS.
"UserID"	A string that matches your user id as configured in the WDS.
"Password"	A string that matches your password as configured in the WDS.
"SSLCertification"	A string that represents the SSL certificate.
"SSLAuthority"	A string that represents the SSL certificate authority
"Proxy"	The proxy servers URL. This can be a DNS entry or IP address. Do not forget to include the port number.
ProxyID	The UserID to be used with the proxy server. If no proxyID is required, you must enter "" in the appropriate field.
ProxyPassword	The password to be used with the proxy server. If no Proxy Password is required, you must enter "" in the appropriate field.

3.2 Authentication ID

The authentication ID is not currently available. The server is programmed to handle this code but requests will not work. The next version will allow you to use this code. The code allocated to this item is 1. An example function that includes an Authentication ID is shown below :

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=",
"22","M","R","1","TestAuthentication")
```

3.3 WDS Authorisation

A user Id and password have been included in your WDS configuration. The code allocated for WDS Authorisation is 2. An example function that includes WDS Authorisation parameters is shown below

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=",
"22","M","R","2","UserID","Pass")
```

3.4 SSL

If your WDS is configured to use SSL you will need to include SSLCertification and SSLAuthority strings. The code for SSL is 3. An example function that includes SSL parameters is shown below:

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=",
"22","M","R","3","SSLCert","SSLAuth")
```

3.5 Proxy

If you are going through a proxy server to access your WDS, you will need to include the ProxyUrl, Proxy Id and Proxy password. If an ID and Password is not required by your proxy, you must include blank fields. The code for a proxy is '4'. The examples below show how to include proxy parameters.

With ID and password :

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=",
"22","M","R","4","http://ProxyURL:7000","ProxID","Ppass")
```

Without ID and Password

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=",
"22","M","R","4","http://ProxyURL:7000","","")
```

Note the empty fields at the end of the function. These must be included.

3.6 Authentication ID and Proxy

As mentioned earlier, Authentication does not work in this beta version. Nevertheless the RTD data server has been programmed for when it will be ready. The code for this combination is **5**. An example function including the parameters is shown below:

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=",  
"22","M","R","5","AKey","http://PrUrl:7000","ProxID","Ppass")
```

3.7 WDS Authorisation and Proxy

If the WDS you are accessing requires username and password and you are going through a proxy server, you need to use this combination. The code allocated is **6**. An example that includes the parameters for this combination is shown below:

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=",  
"22","M","R","6","Id","Pass","http://PrUrl:7000","PID","Pp")
```

3.8 SSL and Proxy

If you are using SSL to connect to your WDS over a proxy server you will need to use the code for this combination, allocated as **7**. An example that includes the parameters for this combination is shown below :

```
=RTD("ExcelRTD.RTDFunctions",,"http://192.168.120.148:80","Reuters","EUR=",  
"22","M","R","7","Cert","Auth","http://PUrl:7000","PID","Pp")
```

4 IMPORTANT MISCELLANEOUS CHARACTERISTICS

Below are some miscellaneous characteristics of the RTD server that you may notice as you use it:

- Automated inserts, where a field contributes cause the O/S to flash the Excel Icon in your task bar indicating something is happening in the background.
- There is nothing to indicate that data is stale. The latest update before the data went stale remains in the field.
- Requests made when a server or service is not available are not cached and not re-requested when the server or service becomes live again. Only requests that have received at least one update are cached.
- The RTD server is run by an engine whose capacity you can increase. If you find that your workbook is processing more updates than it can handle, and Excel isn't giving the user a chance to do anything, set the engine rate to a higher interval.

To set the engine to handle a larger volume of updates, in Excel complete the following:

1. In Excel, go to the Visual Basic Editor (by pressing ALT+F11 or clicking Visual Basic Editor from the Macro menu (Tools menu)).
2. In the Immediate window (press CTRL+G or click Immediate Window on the View menu), type this code:

```
Application.RTD.ThrottleInterval = 1000
```

3. Make sure your cursor is on the line that you just typed, and then press ENTER.
4. To verify that it is set correctly, type this line of if code in the immediate window:
? Application.RTD.ThrottleInterval
5. If you put your cursor at the end of this line and press ENTER, it should display 1000. Then you know that your throttle interval is set correctly.

The default value for the engine interval is 2000 milliseconds.