

R Package for Web Service

User Guide



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R Package for Web Services Overview

The R package allows R statistical computing application users to extract data from their Commodity DataServer environments. This extraction can be achieved by executing Commodity DataServer queries via the Web Services.

Installation

The following packages are prerequisites that need to be installed prior to installing the R package:

- bitopts from CRAN repository specifying the closest repository URL as the source location.

Example:

```
install.packages('bitops', repos = '<REPOSITORY URL>')
```

- RCurl package.

Example:

```
install.packages('RCurl', repos = '<REPOSITORY URL>')
```

- XML package.

Example:

```
install.packages('XML', repos = '<REPOSITORY URL>')
```

Note: Installing RCurl using the source package includes native source codes which makes it somewhat more difficult especially on Windows platforms. If you cannot obtain the RCurl package using the R graphical UI or directly from the Omegahat repository, contact Commodity Data support and they will provide the package for you.

The R package can be installed after being downloaded using the `install.packages` command with the `type` parameter set to "source". For example, the following command installs the R package located on `C:/Morningstar/downloads/` folder:

```
install.packages('C:/Morningstar/downloads/RLIM_1.0-7.tar.gz', type='source')
```

The web service that the R package interacts with should be version 2.0.3 or higher.

Commands

executeQuery - Execute MIM Queries

Description

The executeQuery command will allow the user to run Commodity DataServer queries. Results may either be a data frame or a list of data frames depending on how many reports are generated by the query.

Usage

```
executeQuery(qry, userpw,  
lim.ws="https://ws.morningstarcommodity.com", req.timeout=300,  
verify.peer=TRUE)
```

Argument(s)	
qry	String which holds the Commodity DataServer query to be executed.
userpw	String which holds the username and password separated by a colon. Please make sure the value is surrounded in single or double quotes (') or (") Ex: !imuser@mycompany.com:mypass'
lim.ws	The URL to the web services. Set to https://ws.morningstarcommodity.com by default
req.timeout	Timeout value for requests in seconds. Set to 300 seconds by default
verify.peer	Option to bypass verifying server certificate when using SSL. Set to TRUE by default. See the following link for further details: http://curl.haxx.se/docs/sslcerts.html

Value

A data frame or a list of data frames which contain the result set.

Examples

The following example demonstrates executing a Commodity DataServer query in R:

```
library('RLIM')

mimQry <- "SHOW 1: Close of NG 2: Open of NG 3: High of NG 4: Low of NG
when date is within 1 week"
# Specify username and password separated by a colon
# to be used for logging into Web Services.
# for example, limLogin<-user@mycompany.com:mypass
executeQuery(mimQry, limLogin)
```

Supported Platforms

Morningstar Commodity Data for R Supported Versions Matrix (Windows 32-bit)

R Version	Bitopts	XML	RCurl
2.11.0	1.0-4.1	3.2-0.1	1.4-4.1
2.11.1	1.0-4.1	3.2-0.1	1.4-4.1
2.12.0	1.0-4.1	3.2-0.2	1.5-0.1
2.12.1	1.0-4.1	3.2-0.2	1.5-0.1
2.12.2	1.0-4.1	3.2-0.2	1.5-0.1
2.13.1	1.0-4.1	3.4-2.2	1.6-9.1
2.14.1	1.0-4.1	3.9-4.1	1.91-1.1

Links to Windows packages

XML

Version	Download Link
3.2-0.1	http://www.omegahat.org/R/bin/windows/contrib/2.11/XML_3.2-0.1.zip
3.2-0.2	http://www.omegahat.org/R/bin/windows/contrib/2.12/XML_3.2-0.2.zip
3.4-2.2	http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/2.13/XML_3.4-2.2.zip
3.9-4.1	http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/2.14/XML_3.9-4.1.zip

RCurl

Version	Download Link
1.4-4.1	http://www.omegahat.org/R/bin/windows/contrib/2.11/RCurl_1.4-4.1.zip
1.5-0.1	http://www.omegahat.org/R/bin/windows/contrib/2.12/RCurl_1.5-0.1.zip
1.6-9.1	http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/2.13/RCurl_1.6-9.1.zip
1.91-1.1	http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/2.14/RCurl_1.91-1.1.zip

Troubleshooting/FAQ

- I am not able to access the Omegahat repository and cannot retrieve the prerequisites.
 - Contact Commodity Data support and they will provide you the packages you need.

- I am trying to install RCurl from the source package but my installation fails.
 - The RCurl package has native source codes which require additional and somewhat complicated set of tools and configurations to be present during its installation. Morningstar Commodity Data recommends that the user only install the binary version of the RCurl package.

- I am getting the following error when I try to run a query:
 - Error in curlPerform(url = url, headerfunction = header\$update, curl = curl, :
SSL certificate problem, verify that the CA cert is OK. Details:
error:14090086:SSL routines:SSL3_GET_SERVER_CERTIFICATE:certificate verify failed

 - This error occurs when the web service you are using (specified by lim.ws or <https://ws.morningstarcommodity.com> by default) is sending back a certificate to identify itself but that certificate is not in the list of known trusted certificates. You can either add the servers certificate by appending it to the file `$RCURLDIR\library\RCurl\CurlSSL\cacert.pem` or by using the `verify.peer=false` option.

For more information, see <http://ademar.name/blog/2006/04/curl-ssl-certificate-problem-v.html>

- I appended the certificate to the file but am still having problems...

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- Contact Morningstar Commodity Data support. Please make sure you have the versions of R or RCurl available when contacting support.