



# Download Rates

## User Guide

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### **Important Notice**

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# Download Rates Features

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Download Rates provides a practical way to download currency exchange rates from free, government and commercial exchange rate services and store these rates in related Sage 300 databases.

The downloaded interbank rates can be adjusted by a specified percentage so as to more accurately represent rates likely to be used in a transaction. A currency-code mapping table can be used when ISO currency codes change.

Download Rates is designed to run as an unattended Windows Scheduled Task, as well as from a user interface. Automating rate entry makes the Sage 300 "spread" function practical – the spread is only entered once during setup.

Once rates are downloaded, the program will store the rates in a Sage 300 database. Sage 300 login credentials must be provided. Rates stored in a Sage 300 Company database can be propagated to related companies - meaning those that share a common System database.

Robust retry strategies allow operation over satellite or other variable quality connections. Email notifications can be sent to several recipients indicating the success or failure of the job.

**Notes:**

- Yahoo's service is not currently available as of November 2017.
- Google's service is not currently available as of July 2015.
- Support for Bank of Canada's new RSS feeds is provided as of May 2017.
- Oanda is not supported as of May 2017. A commercial provider, [currencylayer](#), is a much less expensive alternative to Oanda, and is recommended as an alternative to those free rate provider services no longer available.

## Features and Benefits

- Updates multiple exchange rates for multiple days in multiple companies in a single operation.
- Uses Sage 300 Rate Types so that multiple rates for the same two currencies can be maintained.
- Converts from ISO Currency Codes used by providers to "non-standard" Sage 300 Currency Codes.
- Stores all settings in an XML file, so it can run as a Windows Scheduled Task, with the name of the EXE file and the XML file provided in the usual way.  
When run as a task, Download Rates traps error messages and writes them to a log file.
- Creates a basic Windows Scheduled Task and launches the Task Scheduler to make task creation easier.
- Provider rates can be adjusted by a percentage to more accurately reflect a rate actually used in transactions. One-time entry of a Sage 300 "spread" makes this warning function more practical.
- Uses Sage 300 business objects to insure proper multi-user operation.
- Sends email notifications to a list of recipients indicating the success or failure of the job.
- Works with Sage ERP Accpac version 5.6 or 6.0 or Sage 300 2012, 2014, 2016, 2017, 2018 or 2019.
- Supported services include the US Federal Reserve, Bank of Canada, Reserve Bank of Australia and [currencylayer](#). (Users of [currencylayer](#) must subscribe to their service.)
- Uses Sage 300 business objects to update all databases.

# Overview

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Download Rates stores all settings necessary in an XML file and can be edited with the program. This means that Download Rates can be set up to run as a Windows Scheduled Task, with the name of the EXE file and the XML file provided in the usual way - user interface styles vary and are not covered in this document. When run as a task, Download Rates traps error messages so that they will not "pop up" in a window - any errors are written to a log file.

Download Rates will connect to free exchange rates service providers or to paid commercial services. Commercial services provide credentials when you subscribe to their services. Commercial services may also provide a test account for demonstration purposes that do not provide accurate or up-to-date rates.

Download Rates also supports several central bank free services: "The Bank of Canada", the "US Federal Reserve" and the "Reserve Bank of Australia".

If you choose a central bank as an exchange rate provider and you request a rate to convert to a functional currency other than that of the central bank, Download Rates will use "triangulation" to compute an effective exchange rate.

For example: if you want to convert GBP to USD using "The Bank of Canada" as an exchange rate provider, Download Rates will calculate an effective rate by combining the rates that would convert GBP to CAD and CAD to USD.

Once rates are downloaded, the program will store the rates in a Sage 300 database. Sage 300 login credentials must be provided. Rates stored in a Sage 300 Company database can be propagated to related companies - meaning those that share a common System database.

Robust retry strategies are used to allow operation over satellite or other variable quality connections. Email notifications can be sent to several recipients indicating the success or failure of the job.

## Installing Download Rates

Download Rates is installed and run like any other Windows program. The installation program adds it to the Windows start list, and you can create an icon to launch the program on the Sage 300 desktop.

Download Rates can be un-installed from Windows Settings/Control Panel, depending on your version of Windows.

Download Rates is distributed as 1 file, Setup.msi.

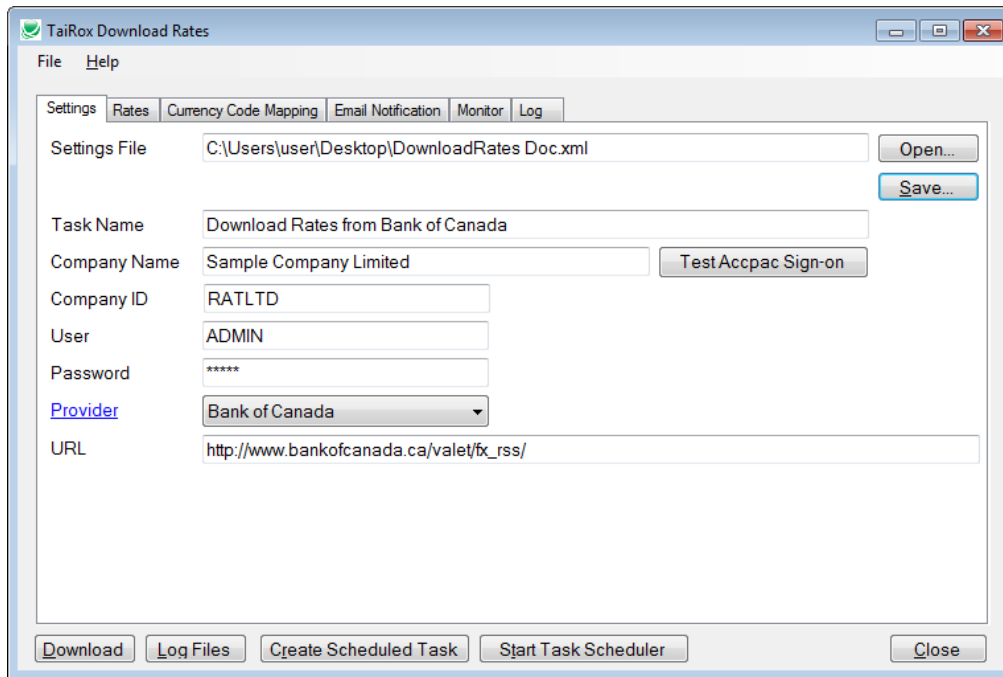
- The program is installed by default in "C:\Program Files (x86)\TaiRox\DownloadRates\"

# Running Download Rates

## Settings Tab

When the program is launched, the following screen will appear. The screen collects setup information and stores the information in XML files which can be used to automate the download operation.

Any authentication information is encrypted in the XML file. Any number of jobs can be set up, stored in different XML files and run as separate Windows Scheduled Tasks.



The **Download** button will download rates immediately from the current provider. When operating as a Windows Scheduled Task, the rates are downloaded based on the windows system date. Some providers supply historical rates that can be downloaded from the user interface only.



**Job Name** - This is used in the email notification subject.

**Company Name** - This is used for documentation purposes.

**Company ID** - This is used to specify which Sage 300 company database is to be used for a Sage 300 session.

**User & Password** - Sage 300 authentication.

**Provider** - A supported provider can be selected from this list. For some providers, options such as date ranges, a rates choice and a credentials tab will appear.

**URL** - The URL to the Provider's service. This value will default and should only be changed when the Provider changes the URL for their service.

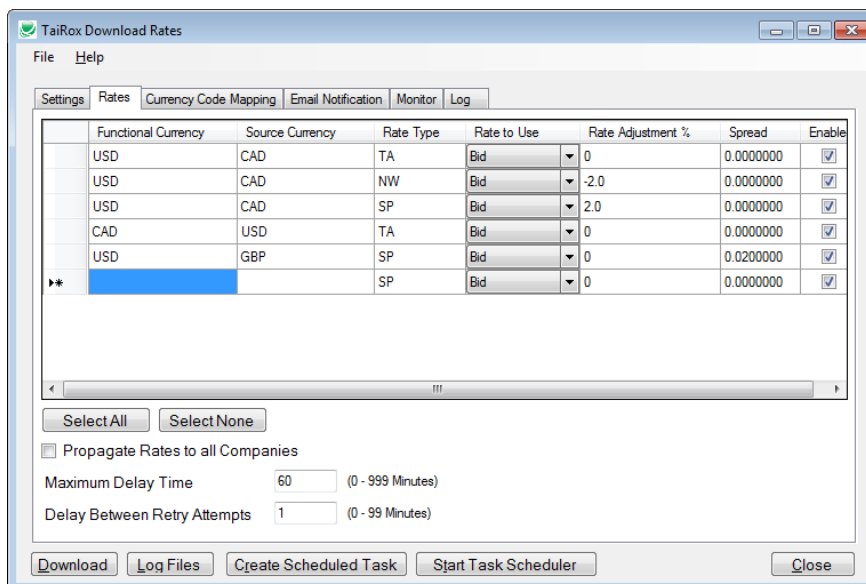
## Rates Tab

The Source and Functional currencies in the grid below are often referred to as "From and To" rates by rates providers. The **Functional Currency**, and **Source Currency** must be a valid ISO 4217 currency codes, and must be valid Sage 300 currency codes. The **Rate Type** must be a valid Sage 300 code.

Some service providers may have Bid and Ask rates while some only provide one exchange rate and the "Rate to Use" column will not be visible. If you select Average, this will be the average of these two rates. The **Rate Adjustment %** column specifies by how much you wish to adjust the given rate up or down to more accurately reflect a rate actually used in a transaction.

**Important Note when using Rate Adjustment:** Check the log details. You will have to "reverse the sign" if using Sage 300 "Divide by" rates.

The **Spread** column is the Sage 300 "spread variance warning" tolerance. The **Enabled** column specifies whether or not the rate set up in the row will be downloaded and stored in the Sage 300 database.



**Propagate Rates to all Companies** - If checked, will cause rates to be set in all company databases with the same system database as the company specified in the Settings tab.

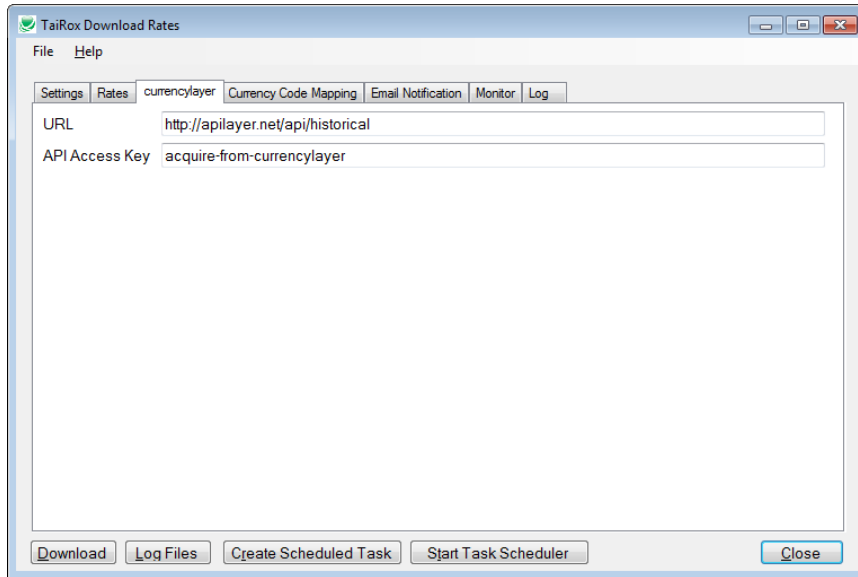
**Maximum Delay Time** - Once retries reach this limit, the attempt to download rates will be abandoned.

**Delay Between Retry Attempts** - This is the time that the program waits before the first re-try attempt. An exponential back-off strategy is used - if 1 minute is specified as the delay, Download Rates will wait 1 minute, 2 minutes, 4 minutes, 8 minutes and so on until the Maximum Delay Time is reached.

## currencylayer Tab

The provider currencylayer requires that you subscribe to their service and obtain an account which you need to specify on this tab in order to use it. If you choose a free exchange rate service provider such as Yahoo this tab will not be visible.

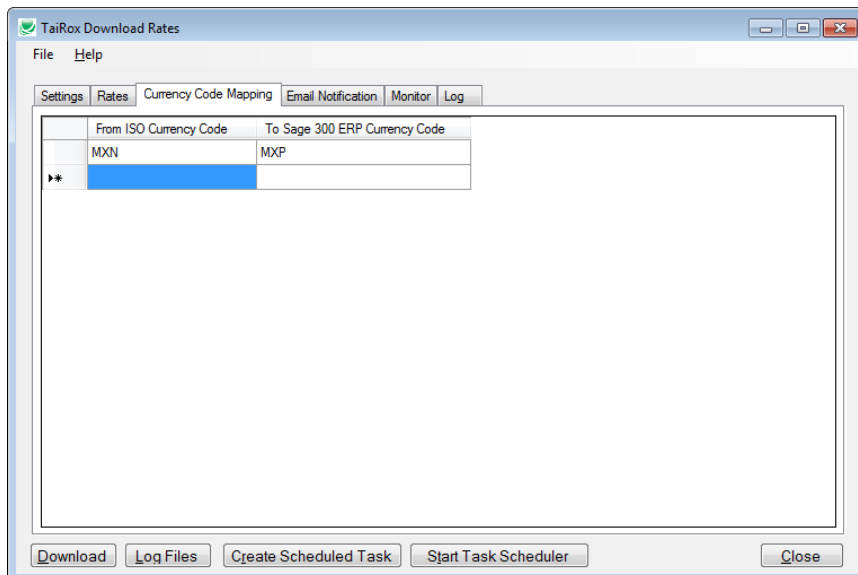
**Important Note:** A provider will supply you with an API key. The API key shown below is not a legitimate key.



## Currency Code Mapping Tab

Providers use ISO Currency Codes, and Sage 300 Currency Codes are normally set up to match. If the rate codes don't match, Download Rates will remap them

Note that an ISO code will sometimes change. For example, Mexican Pesos (MXP) may become Mexican New Pesos (MXN). A client using an older code may not wish to convert their Sage 300 databases, and so will have to remap the currency codes.

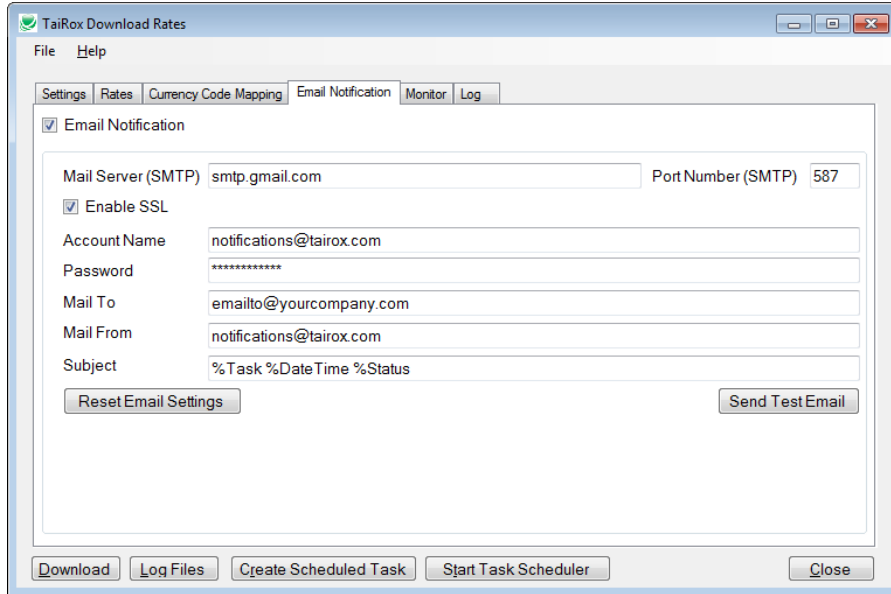


## Email Notification Tab

Email notification may be turned on or off. You can use any SMTP server accessible from the server with credentials as you would set them up in an email client such as Outlook.

You may find it convenient to use notifications@tairox.com with the settings below so as to avoid dependencies on other mail providers - email notification is re-tried, and it is unlikely that TaiRox's gmail service will be unavailable for any extended period of time.

Resetting Email settings will return them to those shown here, with the appropriate password for notifications@tairox.com.



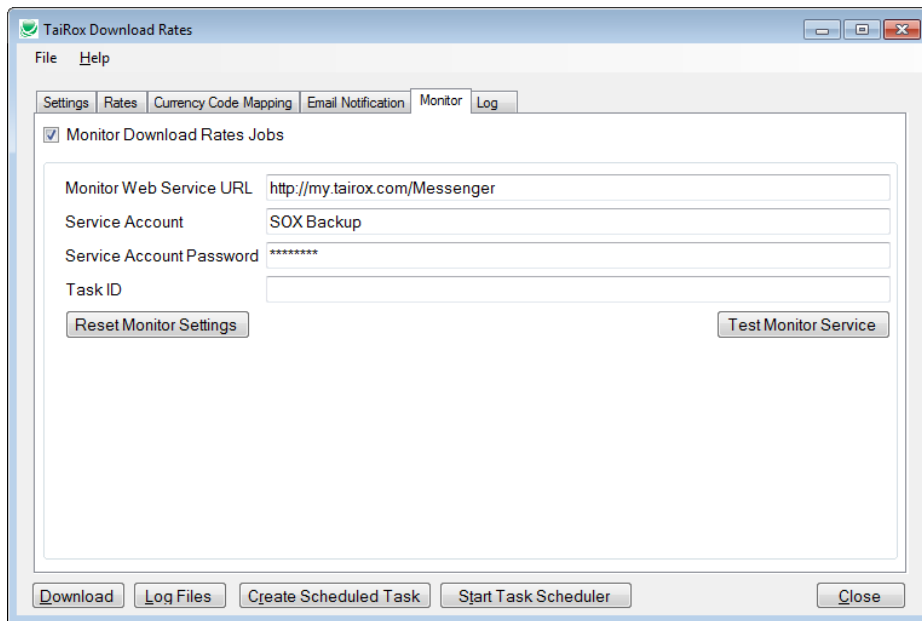
## Monitor Tab

The monitoring service provides a non-email mechanism for reporting success or failure. This can be useful, because, in some circumstances, it may be impossible to send an email notification from the computer on which Download Rates is running. For example, the email ports may be blocked by a firewall.

In those circumstances it may be possible to send a message to a TaiRox service - this only requires the standard browsing port (80) to be useable.

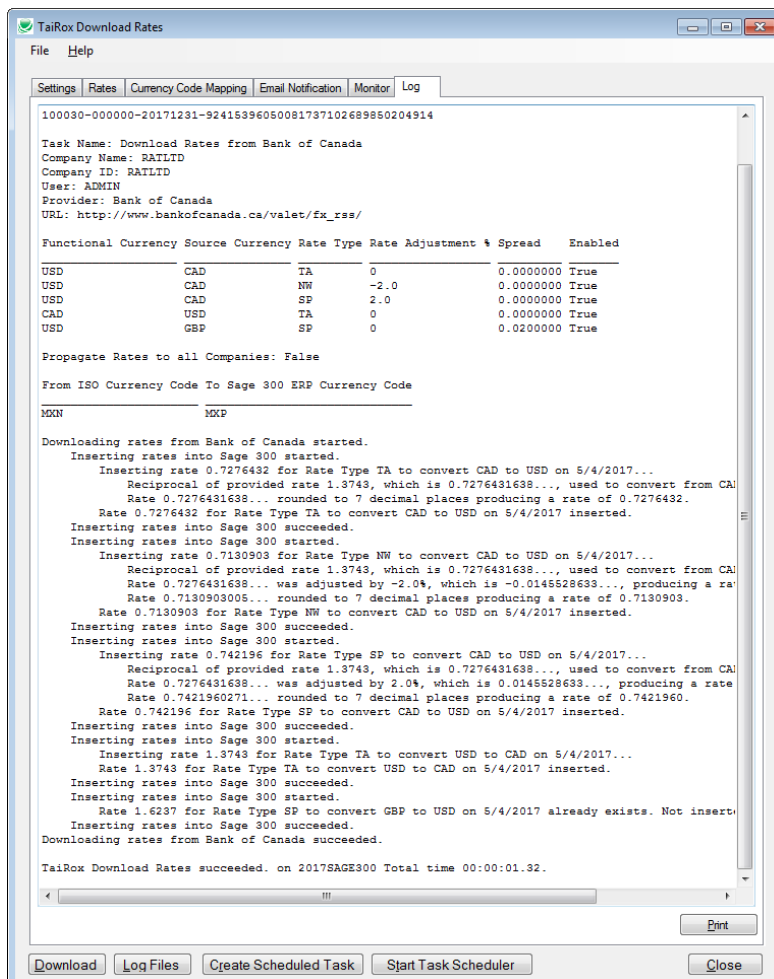
The TaiRox site also notices when a message has not arrived within an expected timeframe.

Note that some coordination with TaiRox is required (the selection of a unique Job ID) to make use of this service.



## Sample Log File

The end of a sample log file shows values retrieved and any calculations performed.





**Important Note:** If a rate already exists for a given date, it will NOT be updated in Sage 300. This allows you to manually correct any mistakes made by a service or to have manual entries previously entered NOT be overridden.

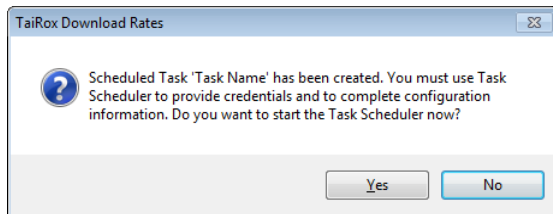
## Create Scheduled Task

Download Rates will create a basic task with that can be managed with the Task Scheduler. The task will have the Task Name on the Download Rates Setting tab.

We provide this feature to ensure that the Task Scheduler's Action tab will be populated with the correct path to the Download Rates program and also populated with the current XML path and name. These are the most common errors made by Sage 300 consultants not familiar with the Task Scheduler.

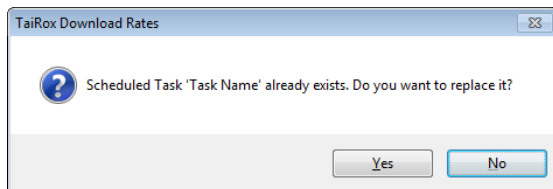
**Important Notes:** The task created by Download Rates will not run on a regular basis until credentials have been provided. Other important options will need to be set up properly. Consult Task Scheduler documentation for important details beyond the scope of this document

If the task is successfully created, a message will appear:

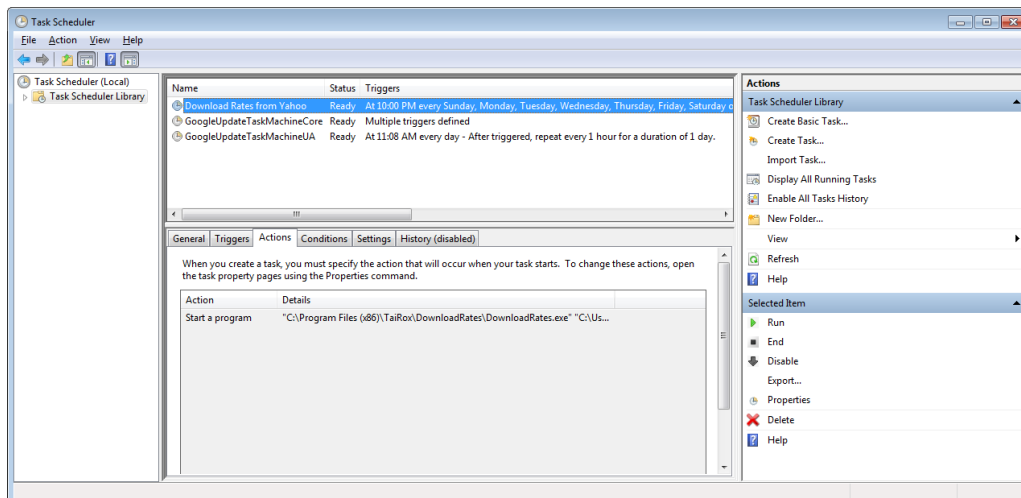


If a task with the same name already exists, you will be warned.

**Note** that replacing the task means not retaining any existing task settings:



The Task Scheduler varies in appearance from one version of Windows to another. Typically:



# Troubleshooting Download Issues

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**Issue:****Download Rates works interactively but the download fails when run as a task:**

First, check that the provider has rates at the time the download runs. When you run the download interactively, you can specify a date for the rates. When you run the download as a task, Download Rates will use the O/S date and time.

Check the following:

- The path to the XML file has blanks and there are no quotes (") around the path+file name.
- The user running the task, whether administrative or not, does not have the right to run tasks when not logged on.
- The user running the task has not logged into the machine running the task, setting up a user profile.
- The task settings (run if not logged on, run with highest privileges, etc.) have not been properly set up.
- During setup testing there is another copy of DownloadRates.exe already running (delete with Task Manager).

"Downloading rates from U.S. Federal Reserve started.

FAIL: Download rates from U.S. Federal Reserve failed. Error=Object reference not set to an instance of an object.

WARNING: There were no rates downloaded to process.