



Marketplace Scheduler

User Guide

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Scheduler Application

The Marketplace Scheduler is part of the Marketplace Publisher. This application will download Publisher lists according to a schedule that can be set on the Marketplace Publisher web site.

The Scheduler UI adds a Morningstar icon to the system tray of the user's desktop running Windows, Mac, or Linux. The user can access the Scheduler UI by clicking on the icon in the system tray and choosing the "Show Scheduler" menu option. After the UI is initialized it creates a Scheduler and displays the status of the jobs in the Scheduler window.

How it works:

The Scheduler downloads schedules that were created on the Marketplace web site and generates a Quartz job for each. When a trigger is executed based on the schedule criteria set in the Marketplace, the 'Downloader' component of the application will download the content for each publist.

The 'Downloader' can also be used to run publisher lists ad-hoc. See the 'Downloader' section of this guide for instructions.

Requirements

Java 7 update 6 or
later [v1.0.6 zip](#)
[with executable jar](#))

Java 8 update or
later [v2.0.10 zip](#)
[\(with executable jar\)](#)

Desktop application

Scheduler User Interface

The Scheduler is a windows application that loads existing schedules from Marketplace, runs the schedules accordingly, and downloads Publisher lists specified in the schedules.

To install the Scheduler:

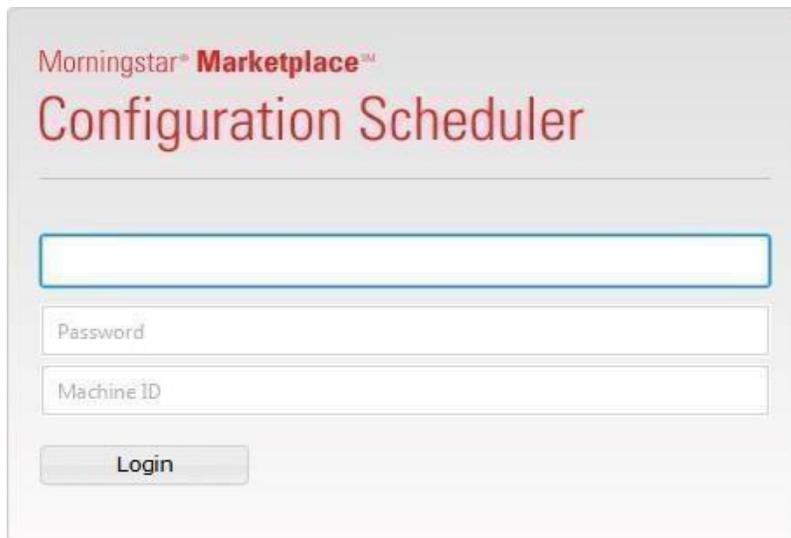
1. Download the zip file.
2. Extract the contents (single jar file) to a directory of your choice
3. Open the extracted directory.
4. Double click the jar file in windows explorer

The application can also run from the command line to provide optional command line arguments. Open a command prompt and cd to the extracted directory. The following shows an example running the app and connecting to a specific host via the `-h` command line option.

```
C:\>cd < extracteddirectory >  
C:\><extracteddirectory>\java -jar scheduler-2.0.18.jar -h=http://localhost:8080
```

(By default the scheduler will connect to the Marketplace production environment. To change hosts, see Appendix)

Installation



The screenshot shows a web-based login form for the Morningstar Marketplace Configuration Scheduler. At the top, it displays the Morningstar logo and the text "Marketplace™ Configuration Scheduler". Below this, there are three input fields: a large empty text box for the username, a "Password" field, and a "Machine ID" field. At the bottom of the form is a "Login" button.

- ✦ **Username** – Utilize the same username and password combination as the one used to log into the Marketplace Publisher to create the Publish Lists and Schedules.

The Auto refresh functionality is selected by default and set to refresh the list of schedules every 15 minutes. The interval for refresh can be customized in the Scheduler.cfg file i.e auto_refresh_interval=15

Logging

In the Scheduler UI some messages are displayed as a notification near the system tray. All log messages are written to a log file regardless which application is ran (UI, Scheduler or Downloader).

The log files can be found in: <USERHOME>/Marketplace/Scheduler.

Server application

Downloader

For Ad-hoc requests, the Downloader application can be used. This can run on the server as a standalone Java application.

```

srao1@ Downloads $java -cp scheduler-2.0.18-jar-with-dependencies.jar com.morningstar.publisher.dl.Downloader -h
usage: Main
-c,--configFile <arg>    Configuration file with username and password.
-d,--datePattern <arg>   Java SimpleDateFormat to append to file names.
                          (yyyyMMddHHmmss, MMdyyyyy, yyyy-MM-dd)
-f,--fromDateTime <arg>  The starting date for new data. Format must be
                          yyyy-MM-dd.
-h,--help                show help.
-l,--list <arg>          Comma separated list names
-s,--saveToDir <arg>     The directory to save downloaded publist files
                          to.
-t,--toDateTime <arg>   The end date for new data. Format must be
                          yyyy-MM-dd.

```

The Downloader requires the following arguments:

Argument	Description
cfgFile	The configurations file with username, password and host. The host is optional and can be specified as a JVM parameter (-Dscheduler.host=https://host:port) or undefined to use as default.
saveToDir	The directory where downloaded publist files are saved to

datePattern	Java SimpleDateFormat to append to file names. (yyyyMMddHHmmss, MMddyyyy, yyyy-MM-dd)
fromDate	The starting date for new data. Format must be yyyyMMdd
ToDateTime	The end date for new data. Format must be yyyyMMdd
pubListNames	List of all publist names to be downloaded, separated by space (pubList1 pubList2 pubList3)

Java command line format:

```
> java -cp scheduler-2.0.18.jar com.morningstar.publisher.dl.Downloader <cfgFile>
<saveToDir> <datePattern> <fromDate> <pubListNames>
```

Example java command line:

```
> java -cp scheduler-2.1.18.jar com.morningstar.publisher.dl.Downloader scheduler.cfg
F:\temp\mpdownloads yyyyMMddHHmmss 2013-07-01 Y_List
```

Scheduler

The Scheduler can be run on the server as a standalone Java application:

```
com.morningstar.publisher.sched.PubScheduler
```

Example java command line:

```
java -jar scheduler-2.0.18.jar scheduler.cfg
```

A user can also see the different options for running the scheduler using the following command:

```
psrao1@ Downloads $ java -cp scheduler-2.0.18-jar-with-dependencies.jar com.morningstar.publisher.sched.PubScheduler -h
usage: Main
  -a,--autoRefresh <arg>  Turn auto refresh on or off i.e. -a true.
                           Default value is true
  -c,--configFile <arg>  Path to the config file
  -h,--help                show help.
```

Configuration file

All three components (User Interface, Downloader, and Scheduler) use a configuration file for reading the username, password and machine id.

The configuration file should contain the following properties:

- ✦ **username** - The user's login name for Marketplace
- ✦ **password** - The user's password. May be un-encrypted. Will be encrypted the first time one of the applications reads it.
- ✦ **encrypted** - A Boolean flag stated if the password is encrypted or not. (true | false)
- ✦ **machine_ID** - The ID of the machine the application is to be ran on. (i.e. dev01, prod02)
- ✦ **host** - (Optional) Specifies the Marketplace host. If not defined then the default <https://mp.morningstarcommodity.com> is used unless specified as a JVM or command line options.

- ✦ **Auto_Refresh_Interval** - This will refresh your list based on the interval specified in the UI and it is by default set to 15mins.

The configurations file example below will only download schedules for john.doe@globe.com with the machine ID "dev01":

```
username=john.doe@mycompany.com  
password=FiMNBf6MLMB9d/5ba07onQUtGFBUglgC4Uq06aBU7U  
\= encrypted=true machine_id=dev01
```

Custom Formatting

The scheduler can also accommodate an 'Override' file. Morningstar can configure this file to customize the format of the publisher lists/data. Please contact your sales or account representative for further information regarding this.

Appendix

The user can change the host for the scheduler application. The host is determined in the following order:

1. As a command line option. (-h=http://somehost:port)
2. As a JVM parameter. (-Dscheduler.host=http://somehost:port)
3. In the config file. (host=http://somehost:port)
4. Undefined. When no host is defined as a command line option, JVM parameter or in the config file the default is http://mp.morningstarcommodity.com

Scheduler Frequently Asked Questions

“Range” and “Increments” features

Frequency	<input type="checkbox"/> Everyday	<input checked="" type="checkbox"/> Tuesday	<input checked="" type="checkbox"/> Thursday	<input type="checkbox"/> Saturday		
	<input checked="" type="checkbox"/> Monday	<input checked="" type="checkbox"/> Wednesday	<input checked="" type="checkbox"/> Friday	<input checked="" type="checkbox"/> Sunday		
Time	<input type="radio"/> Range	<input type="checkbox"/> 12:00 am	<input type="checkbox"/> 6:00 am	<input type="checkbox"/> 12:00 pm	<input type="checkbox"/> 6:00 pm	<input checked="" type="checkbox"/> Minutes on the hour
		<input type="checkbox"/> 1:00 am	<input checked="" type="checkbox"/> 7:00 am	<input type="checkbox"/> 1:00 pm	<input type="checkbox"/> 7:00 pm	<input type="text" value="10"/>
		<input type="checkbox"/> 2:00 am	<input type="checkbox"/> 8:00 am	<input type="checkbox"/> 2:00 pm	<input checked="" type="checkbox"/> 8:00 pm	
		<input type="checkbox"/> 3:00 am	<input type="checkbox"/> 9:00 am	<input type="checkbox"/> 3:00 pm	<input type="checkbox"/> 9:00 pm	
		<input type="checkbox"/> 4:00 am	<input type="checkbox"/> 10:00 am	<input type="checkbox"/> 4:00 pm	<input type="checkbox"/> 10:00 pm	
		<input type="checkbox"/> 5:00 am	<input type="checkbox"/> 11:00 am	<input type="checkbox"/> 5:00 pm	<input type="checkbox"/> 11:00 pm	

Answer:

The range feature works in parallel with the Frequency option. After a user selects the desired frequency, he will need to select the time, which could be either a “Range” or an “Increments”.

If the “Range” is selected and specific times, the schedule will run at those times. Based on the screenshot above, the schedule will run the lists at 7:00am and 8:00pm on Monday through Sunday and omit Saturday. If the “Minutes on the hour” is checked and filled, the tool will run the lists at those specific times i.e. 7:10 am on Monday through Sunday (except Saturday).

Like “Range”, the increments feature works in tandem with frequency. If the user selects “Increments”, they will be required to fill out Start At time, Check every, and the “Time increment”. The stop at is optional but we advise the user fills it out.

The increments feature allows you to run the schedule for a specified period (start at time to stop at time).

Frequency	<input type="checkbox"/> Everyday	<input checked="" type="checkbox"/> Tuesday	<input checked="" type="checkbox"/> Thursday	<input type="checkbox"/> Saturday		
	<input checked="" type="checkbox"/> Monday	<input checked="" type="checkbox"/> Wednesday	<input checked="" type="checkbox"/> Friday	<input checked="" type="checkbox"/> Sunday		
Time	<input type="radio"/> Range	<input type="checkbox"/> 12:00 am	<input type="checkbox"/> 6:00 am	<input type="checkbox"/> 12:00 pm	<input type="checkbox"/> 6:00 pm	<input type="checkbox"/> Minutes on the hour
		<input type="checkbox"/> 1:00 am	<input type="checkbox"/> 7:00 am	<input type="checkbox"/> 1:00 pm	<input type="checkbox"/> 7:00 pm	<input type="text" value="0"/>
		<input type="checkbox"/> 2:00 am	<input type="checkbox"/> 8:00 am	<input type="checkbox"/> 2:00 pm	<input type="checkbox"/> 8:00 pm	
		<input type="checkbox"/> 3:00 am	<input type="checkbox"/> 9:00 am	<input type="checkbox"/> 3:00 pm	<input checked="" type="checkbox"/> 9:00 pm	
		<input checked="" type="checkbox"/> 4:00 am	<input type="checkbox"/> 10:00 am	<input type="checkbox"/> 4:00 pm	<input type="checkbox"/> 10:00 pm	
		<input type="checkbox"/> 5:00 am	<input type="checkbox"/> 11:00 am	<input type="checkbox"/> 5:00 pm	<input type="checkbox"/> 11:00 pm	
	<input checked="" type="radio"/> Increments	Start At	Check every	Time Increment	Stop At (Optional)	
		<input type="text" value="11:00 AM"/>	<input type="text" value="15"/>	<input type="text" value="Minutes"/>	<input type="text" value="11:00 PM"/>	

Based on the selections on the screenshot above, the scheduler will run the schedule every 15 mins from 11am to 11pm.

What is the ON/OFF button on the Publisher UI

Answer:

This feature allows the user to turn on and off the schedules without adding it or removing from the Scheduler UI.

Current Schedules		
Name	Description	Enabled
Scheduler_Run1	Natural Gas	<input checked="" type="checkbox"/> ON
Scheduler_Run2	ICE	<input type="checkbox"/> OFF

How does “Last Value Only” work

Answer:

If the “Last Value Only” is checked on the Marketplace Scheduler configuration UI, then for all the lists on the schedules, only the last value will be retrieved.

Last Value Only	<input checked="" type="checkbox"/>			
Frequency	<input type="checkbox"/> Everyday	<input checked="" type="checkbox"/> Tuesday	<input checked="" type="checkbox"/> Thursday	<input type="checkbox"/> Saturday
	<input checked="" type="checkbox"/> Monday	<input checked="" type="checkbox"/> Wednesday	<input checked="" type="checkbox"/> Friday	<input checked="" type="checkbox"/> Sunday

API calls and Time Zones

Answer:

When pulling data using the list and schedules, all the times are converted to Central Time irrespective of the time zone of the user; in other words, the tool is location agnostic and will be based off the time zone parameter specified by the user in the Marketplace Scheduler configuration UI.

Time Zone	America/Chicago
Save	Cancel

In the screenshot above, the schedules will run in the America/Chicago time zones regardless of the user physical location. If the user is in New York and want to run schedules on that time zone, the user will need to select the appropriate option in the drop-down menu.

How does the “Check Data” feature work?

Answer:

Users have the option to choose between “Only Check for New Data” or “Check Back” for a specific number of days.

“Only Check for New Data” will check for new data in the lists in the schedule from the last time the schedule run these lists successfully.

Check Data	<input type="radio"/> Only Check for New Data	<input checked="" type="radio"/> Check back	1	Days for Data then Check for New
	<input type="checkbox"/> Only Consider Dates Within the Last	0	Days	
Last Value Only	<input checked="" type="checkbox"/>			
Frequency	<input type="checkbox"/> Everyday	<input checked="" type="checkbox"/> Tuesday	<input checked="" type="checkbox"/> Thursday	<input type="checkbox"/> Saturday
	<input checked="" type="checkbox"/> Monday	<input checked="" type="checkbox"/> Wednesday	<input checked="" type="checkbox"/> Friday	<input type="checkbox"/> Sunday

“Check Back” will check back for all the data going back to what the user specified in the Marketplace Scheduler Configuration interface.

“Only Consider Dates Within the Last” will check back for data with the transaction dates within the specified number for days. It is the equivalent of including the parameter “fromPubDateTime” and will default to a “toPubDateTime” of today. For example, if “Check back” is set to 5 days and “Only Consider Dates Within the Last” is set to 2 days, the output will only include the last 2 days of data but will take into consideration any deltas that may have occurred within the last 5 days.

The screenshot shows a configuration interface with the following elements:

- Check Data:** Two radio buttons: "Only Check for New Data" (unselected) and "Check back" (selected). A dropdown menu next to "Check back" is set to "1". To the right, it says "Days for Data then Check for New".
- Only Consider Dates Within the Last:** A checkbox (unselected) followed by a dropdown menu set to "0" and the word "Days".
- Last Value Only:** A checked checkbox.
- Frequency:** A grid of checkboxes for days of the week:
 - Everyday:
 - Tuesday:
 - Thursday:
 - Saturday:
 - Monday:
 - Wednesday:
 - Friday:
 - Sunday:

Are there limits to the number of lists within a schedule?

Answer:

We allow users to run an unlimited number of lists in a schedule.

Config File explained

Answer:

The configuration files can be found in at `$Home\Marketplace\Scheduler\scheduler.cfg`

Below are the items we capture in the configuration file:

`#Default schedule for auto refresh is set to 15 minutes`

proxy.password= → this will be automatically generated by our system

password= → this is the Marketplace login credentials

auto_refresh_interval=15 → the default is set to 15 mins but can be changed by user

encrypted=true → encrypts your password

username= → this is the user's Marketplace username

machine_id= → this is the machine Id for the particular schedule the user wants to run and is set on the Marketplace Scheduler Configuration interface.

Configuration file& Location change

Answer:

The configuration file is in the user's home directory under the Marketplace folder `$Home/Marketplace/Scheduler/scheduler.cfg`. The Scheduler file will be automatically created when the user runs the Scheduler the first time.

This location can be changed by user if he is using a UNIX 's operating system by passing the file name when launching the Scheduler.

Publisher Lists Changes & Refresh Functionality in Scheduler

Answer:

If a user changes the Publisher Lists, the changes will not be reflected in the Scheduler unless the "Auto Refresh" functionality is checked in the Scheduler.

If a Publisher list is deleted, assuming the "Auto Refresh" is set, it will be removed from the Scheduler when it gets refreshed the next time.

To avoid changes not being captured in both places, a user needs to check the "Auto Refresh" functionality.