



# Market Insight Launcher

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Technical Details of the Market Insight Launcher Mechanism

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## Overview

Market Insight is a marketing data analysis system with predictive modelling and campaign management capabilities that include the D&B Global or Local Market business to business data. The application uses a web service based multi-tier architecture with a number of different client applications. This document covers the Market Insight client and the Launcher mechanism that manages delivery of the latest version to users' PCs.

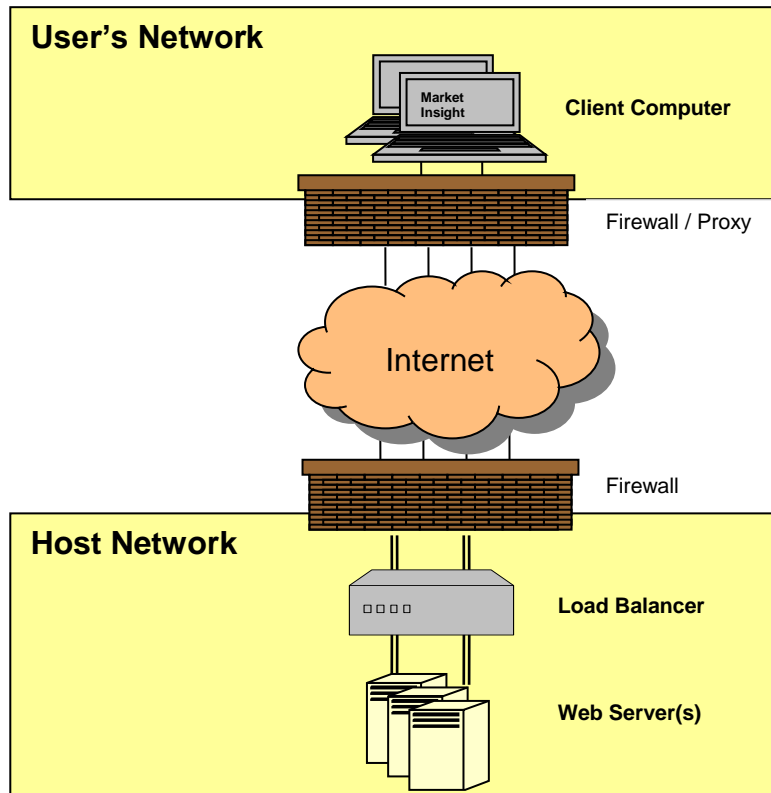
Market Insight is a Windows.NET application which operates on Windows PCs with the Microsoft Windows.NET framework version 4.5 (or above) installed. To aid deployment of Market Insight, most Enterprise installations use the Market Insight Launcher ("Launcher"). The Launcher is a small footprint Windows.NET application which is installed on the user's PC and which manages the subsequent download and refresh of the main Market Insight application.

The Launcher approach has the benefit of only requiring an installation process on the first occasion the user runs Market Insight. Subsequent updates are handled automatically from the central server and do not require the typical uninstall – reinstall process. From 2018 the installation does not require elevated (administrator) permissions if installed for a single user.



## Summary Launch Process

Market Insight Launcher is typically used in the following setting.



The Web Server(s) hold links to the resources necessary for the operation of Market Insight Launcher:

- A web browser landing page or direct link to an installer file
- The Launcher installer (an MSI file)
- Zip files containing all the files that make up the current Market Insight installation
- The Market Insight configuration settings file

The user accesses Market Insight on the first occasion by using a web browser to reach download the Launcher installer MSI file. When the user runs the installer (with elevated permissions if necessary), the Launcher is installed on their machine with a configuration file that identifies the server. During installation a shortcut will be placed on the desktop and in the Programs menu so that Launcher can be run on subsequent occasions.

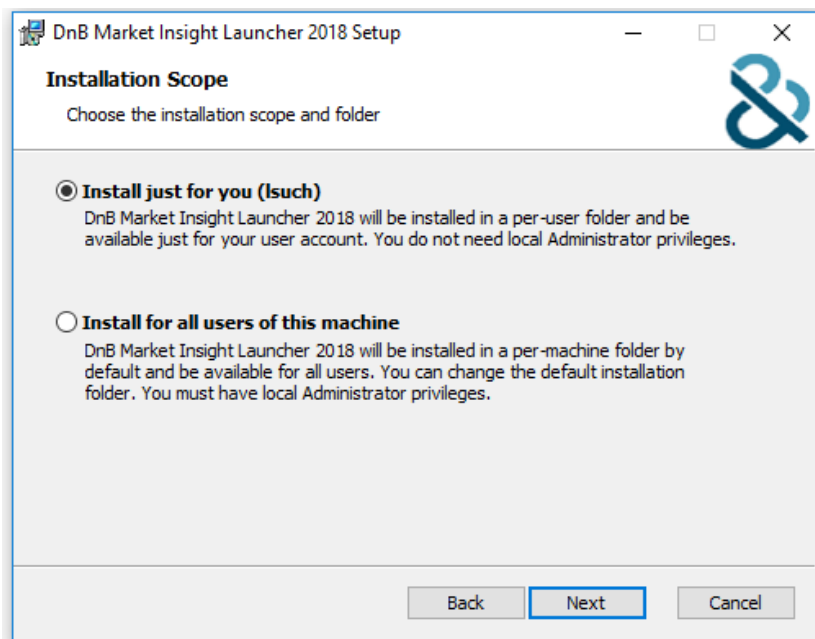
On first execution, the Launcher connects to the server identified in the configuration file and downloads the Market Insight zip files, decompresses them and executes Market Insight. On subsequent executions, the Launcher connects to the server and compares

the locally cached copy of the zip files with the equivalent files available via the web server. If Launcher finds that the zip files available via the Web Server(s) are newer than any ones it has previously downloaded, it will download them and then run them in order to launch Market Insight. If the Market Insight zip files available via the Web Server(s) are not newer than previously downloaded versions Launcher will NOT download the file, instead running the up to date copies it already has.

This means that when Launcher is run for the first time it will typically take a few minutes to download the Market Insight zip files before running them. On subsequent runs, it will not need to re-download these files and so will start Market Insight much more quickly. It should be noted that Launcher will always require access to the Web Server as it will need to check the timestamp of the zip files even when they don't need to be downloaded.

## Installation

As noted above, from 2018, the distribution of the Launcher application has changed. We have moved from a per-machine Windows Installer package file to a dual-mode package. This package can either install the Market Insight Launcher application per-machine or per-user. **This means that a user does not typically require administrator privileges when installing the new launcher for their user only.** The user has a choice when installing:



If the launcher is installed per-machine then elevated permissions will be required. No matter if the launcher is installed per-user or per-machine the user does not require elevated permissions to run the Launcher.

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## Detailed Launch Process

### Note

In the examples in this document, the web server URL is <https://www.dnbmi.com> and the Market Insight zip files are stored at URL <https://www.dnbmi.com/FastStatsWebService/GetBinary.aspx/Discoverer/Binaries>.

Launcher executes the following steps when it is run:

- 1) Launcher reads the proxy information from the user's settings (these are the settings visible from within your chosen browser).
- 2) Launcher uses these settings to request the URL

<https://www.dnbmi.com/FastStatsWebService/GetBinary.aspx/Discoverer/Binaries/SmartAssembly.xml>

This involves opening a TCP connection on port 443 to the machine serving **www.dnbmi.com** and sending a request for **SmartAssembly.xml**. This request will be encrypted as it is on a secure connection in this example. **SmartAssembly.xml** is a configuration file used to tell Launcher what zip files it needs to download.

- 3) **www.dnbmi.com** responds using the same connection and sends back the contents of the file (encrypted on a secure connection).
- 4) Launcher uses this information to identify what other files it needs (e.g. all the **Apteco\*.dlls** held in the **AptecoAssemblies.zip** file) and will go back to **www.dnbmi.com** to download them as they are required by Market Insight
- 5) Launcher downloads a named configuration from the URL it has been configured with e.g. <https://www.dnbmi.com/FastStatsWebService/DiscovererConfiguration.aspx/Discoverer> the settings that control the options etc. displayed by Market Insight when it runs.
- 6) Then Launcher downloads Discoverer.exe from <https://www.dnbmi.com/FastStatsWebService/GetBinary.aspx/Discoverer/Binaries/Discoverer.exe.zip>
- 7) Launcher then requests the .Net **FullTrust** permission set that Market Insight will need to execute properly. These permissions enable functions such as Drag and Drop.
- 8) Launcher then runs **Discoverer.exe**. This causes the Market Insight splash screen to display.
- 9) As **Discoverer.exe** needs other DLLs it asks Launcher to download them. These are all downloaded inside .zip files whilst the splash screen is displayed.



- 10) **Discoverer.exe** displays the main Market Insight window and login screen. At this point **Launcher.exe** has finished its work as all the required resources have now been downloaded. Launcher will, however, download various XML settings files as required by Market Insight. These are re-downloaded each time Market Insight is run.

## Version Control

Note that the Market Insight Launcher mechanism allows strong version control. As all users' Market Insight software is managed from the zipped application files and configuration setting files held on the central server, a simple change control mechanism on this area can ensure all users are upgraded together.

## Compatibility

Market Insight Launcher and Market Insight do not have any known compatibility issues. The applications are properly constructed Windows.NET programs that operate with network, proxy, firewall and Windows resources in a normal and well understood manner.

## Files Used By Market Insight Launcher

As of the 2017 Q4 release (version 1.1.17313) the file sizes for each of the zip files download are shown below.

File	Zipped Size (MB)	Unzipped Size (MB)
ActiproAssemblies.zip	0.5	1.3
AptecoAssemblies.zip	107	298
ComponentOneAssemblies.zip	1.8	4.6
Discoverer.exe.zip	0.1	0.2
Discoverer64.exe.zip	0.1	0.2
InfragisticsAssemblies.zip	15.8	40
NevronAssemblies.zip	4.0	12.5
TelerikAssemblies.zip	7.0	26.5
TOTAL		

These zip files will be downloaded to:

**%USERPROFILE%\Local Settings\AppData\Apteco\Discoverer\LauncherCacheZipFiles**

Where **%USERPROFILE%** will be generally be in **C:\Users\<username>**

These files are unzipped into:

**%USERPROFILE%\Local Settings\AppData\Apteco\Discoverer\LauncherCache**

Once Market Insight is running it will download the following files when it needs them:

- various settings files (approx 30Kb)
- Microsoft Office templates for the Transfer To functions (approx 850Kb if all used)
- image files for the Help -> About box etc (approx 550Kb)

When they are used, the Office templates are stored on disk at:

**%USERPROFILE%\Local Settings\AppData\Apteco\Discoverer\<systemname>**

The other files are loaded straight into memory.

Market Insight will also download and cache picklists for “cacheable” (i.e. all non-virtual and those specifically configured virtual) selector variables. These are transferred and stored in a zipped file and can vary in size. For example the zipped file for a picklist with approximately 12,000 codes is 69 KB. These files are downloaded when the variable is used for the first time and stored in the directory:





**%USERPROFILE%\Local Settings\Application Data\Apteco\Market Insight\<<systemname>\<systemdate>**

Note the fact that the system date is used in this file path; Market Insight will only download these files the first time the variable is used after a system rebuild. Even if Market Insight is closed and reopened it can use the cached file from disk rather than download it again.



## Troubleshooting

Sometimes Market Insight Launcher will not be able to download and launch Market Insight successfully first time. There are various reasons for this, most commonly to do with the user's network setup or local computer security privileges. The following lists some common issues to be aware of.

Note that Launcher writes a log file when it runs. This can sometimes provide information to help in diagnosing a problem. The log file is written to the directory:

**%USERPROFILE%\Local Settings\AppData\Apteco\Launcher**

The filename is of the format **launcher-pid-XXXX.log**, where **XXXX** is the Windows process ID of the running **Launcher.exe**. This ID can be found using Windows Task Manager, but it is often easiest to find the appropriate log file by viewing the directory in Windows Explorer and ordering the files by the Date Modified.

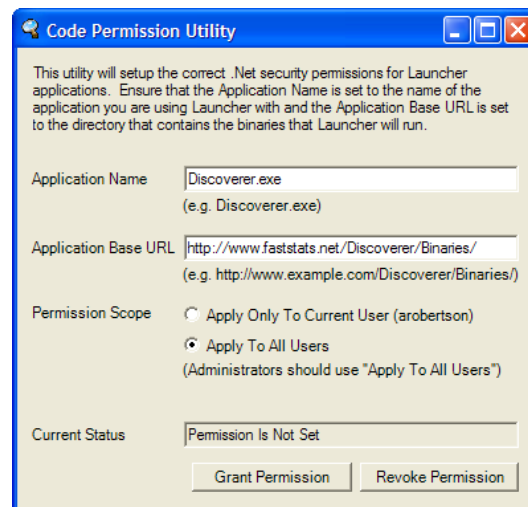
- If Launcher can't be installed correctly, check that the user has the appropriate security permissions on their computer. Launcher needs to be installed with administrative permissions.
- If Launcher can be installed, but gives the following type of error when it is started it is because it can't grant itself the correct permissions to run (see step 7 of the detailed launch process, above):

**System.Security.Policy.PolicyException: Policy level 'User' could not be saved.**

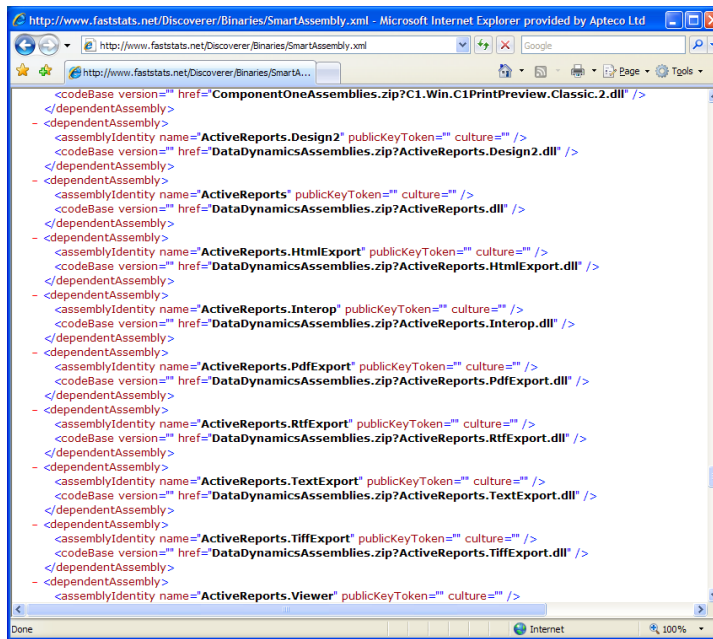
You can use the Code Permission Utility (released as part of the Utilities download) to set the correct permissions and allow Launcher to run. To do this:

1. Log onto the machine in question as an administrator
2. Run the CodePermissionUtilitySetup.msi installer
3. Start the Code Permission Utility from the Start -> Market Insight menu.





4. Enter the Application Name (normally Discoverer.exe) and the URL of the Binaries directory on your web server that Launcher is install in. Then ensure that the Permission Scope is set to Apply To All Users and press the Grant Permission button.
  5. Close the Code Permission Utility and log off as the administrator Windows user. Log back on as the original affected user and Launcher should now run correctly.
- If Launcher starts but then displays an error message it is probably because it can't connect correctly to the host Web Server(s) to download Market Insight. Check the following things.
    - Can the user view the SmartAssembly.xml file in their web browser? Get the user to browse to <https://www.dnbmi.com/FastStatsWebService/GetBinary.aspx/Discoverer/Binaries/SmartAssembly.xml> An XML document similar to the one shown below should be displayed:



```
<codeBase version="" href="ComponentOneAssemblies.zip?C1.Win.C1PrintPreview.Classic.2.dll" />
</dependentAssembly>
- <dependentAssembly>
  <assemblyIdentity name="ActiveReports.Design2" publicKeyToken="" culture="" />
  <codeBase version="" href="DataDynamicsAssemblies.zip?ActiveReports.Design2.dll" />
</dependentAssembly>
- <dependentAssembly>
  <assemblyIdentity name="ActiveReports" publicKeyToken="" culture="" />
  <codeBase version="" href="DataDynamicsAssemblies.zip?ActiveReports.dll" />
</dependentAssembly>
- <dependentAssembly>
  <assemblyIdentity name="ActiveReports.HtmlExport" publicKeyToken="" culture="" />
  <codeBase version="" href="DataDynamicsAssemblies.zip?ActiveReports.HtmlExport.dll" />
</dependentAssembly>
- <dependentAssembly>
  <assemblyIdentity name="ActiveReports.Interop" publicKeyToken="" culture="" />
  <codeBase version="" href="DataDynamicsAssemblies.zip?ActiveReports.Interop.dll" />
</dependentAssembly>
- <dependentAssembly>
  <assemblyIdentity name="ActiveReports.PdfExport" publicKeyToken="" culture="" />
  <codeBase version="" href="DataDynamicsAssemblies.zip?ActiveReports.PdfExport.dll" />
</dependentAssembly>
- <dependentAssembly>
  <assemblyIdentity name="ActiveReports.RtfExport" publicKeyToken="" culture="" />
  <codeBase version="" href="DataDynamicsAssemblies.zip?ActiveReports.RtfExport.dll" />
</dependentAssembly>
- <dependentAssembly>
  <assemblyIdentity name="ActiveReports.TextExport" publicKeyToken="" culture="" />
  <codeBase version="" href="DataDynamicsAssemblies.zip?ActiveReports.TextExport.dll" />
</dependentAssembly>
- <dependentAssembly>
  <assemblyIdentity name="ActiveReports.TiffExport" publicKeyToken="" culture="" />
  <codeBase version="" href="DataDynamicsAssemblies.zip?ActiveReports.TiffExport.dll" />
</dependentAssembly>
- <dependentAssembly>
  <assemblyIdentity name="ActiveReports.Viewer" publicKeyToken="" culture="" />
```

- Is the Launcher.exe process allowed to connect to the Internet? It is possible that some local firewall software may be blocking non-authorized processes from connecting to the network.
- Does the firewall, proxy or content filter on the user's network allow the download of XML and zip files? Check with the system administrator responsible for the user's network that connections to the Web Server(s) are allowed and that downloads for XML and zip files will be permitted.
- Some content management software built into the user's network might scan zip files as they are downloaded. If this takes a long time to do then Launcher can "time out" and report an error. It may be required for the system administrator to add exceptions into the content management software so that zip files coming from the Web Server are not scanned in this way.

Usually, information in the Launcher log file and/or information in the firewall, proxy server or content filter on the user's network will contain the details required to fix any problems.