Working With Stratum Connector for Excel How-To and Tips For Users



This document shares best practices to consider when using the Stratum Connector for Excel add-in to get data from the Stratum Data Hub into Excel or to upload data from Excel to the hub. A getting started video plus some business cases for using the add-in are shared in the beginning of this document.

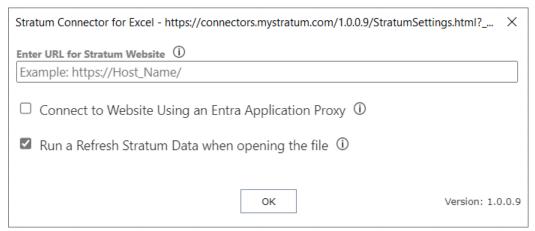
- Getting Started
- Best Practices
- Other Topics & FAQ's

Note: Silvon Support can be reached at CustomerSupport@silvon.com.

Getting Started

Things To Know Before You Get Started

This Excel add-in is only compatible with secured (HTTPS) Stratum environments. Views from your Stratum environment are used to get data from the Stratum Data Hub into Excel. You need to provide the secure URL for your Stratum environment and may also be prompted for your Stratum user name and password in order to use the add-in to get or upload data. If you have a hosted Stratum Cloud implementation that uses an Entra Application Proxy (Entra Identity), you will need to select the "Connect to Website Using an Entra Application Proxy" option in the same window where you specify the URL for the Stratum environment.



The add-in's "Get Stratum Data" command brings data from a selected Stratum view into an active Excel workbook as a table in a new worksheet. The worksheet name is based on the view name and the table name includes the view's unique Stratum View Id.

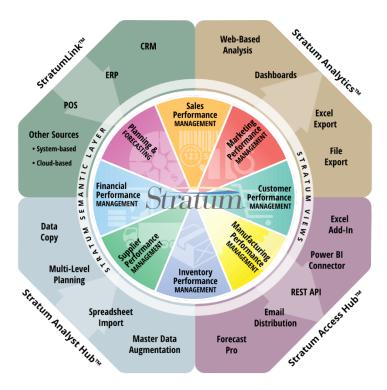
The add-in's "Upload Data To Stratum" command uses Stratum Data Import mapping functionality and will prompt you to map uploaded data into the hub. Check out the <u>Data Import section</u> of Stratum help for detailed information and descriptions of windows used in data mapping.

Using this add-in requires a valid license to specific Stratum products. Additional requirements are noted in the Installation Guide for the add-in. For more information on Silvon's Stratum products and services, and how you can license Stratum, please email us at info@silvon.com.

Your version of Microsoft Excel must be Excel 2016 or greater on Windows, Excel 365, or Excel for Web using Edge or Chrome. Using Excel on the Web with IE is not supported.

Video Introduction

The Stratum Connector For Excel add-in is part of an information retrieval set of apps known as the Stratum Access Hub. Watch <u>this video</u> for a quick introduction to using Stratum Connector for Excel features. Examples of getting data from the Stratum Data Hub *and* uploading data to the hub are shown in the video. Other ways you can utilize the add-in are noted in the next section of this document.



Example Uses For Stratum Connector for Excel

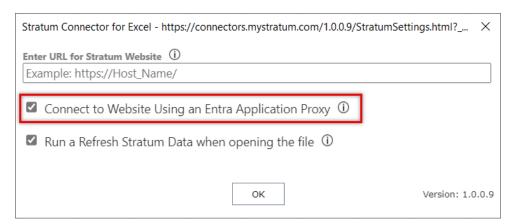
Use the add-in to simplify the process of populating your Excel reports with Stratum data and the process of uploading data into the Stratum Data Hub. The following cases illustrate the main ways to use the add-in.

- 1. Do a one-time data request for Stratum data. Get data from Stratum to use in Excel.
- 2. Build Excel reports, charts, and dashboards with Stratum data. Use the Refresh Stratum Data command to make sure your reports reflect the most **current** Stratum data.
- 3. Update Stratum with data from an Excel workbook that originates from outside of Stratum. This can include data that is sourced from a forecasting application, internet data, or hand-crafted data.
- 4. Retrieve data from Stratum, make updates to the data in Excel, and send updated data back to Stratum.

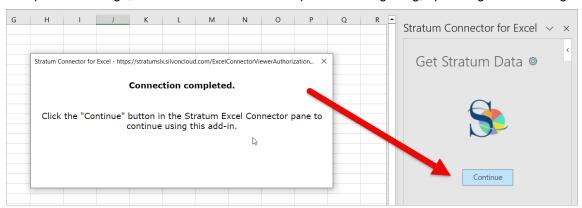
Connection Settings For A Hosted Implementation

Silvon's hosted Stratum Cloud implementations can use an Entra Application Proxy configuration. In these types of implementations, you must select the add-in's "Connect to Website Using an Entra Application Proxy" option that's in the same settings window where you specify the URL of the Stratum website to be used with the add-in. If you are prompted for credentials, use the same Entra User ID / Password that you use to access Stratum. Viewer.

Note: If you aren't sure whether or not you have a hosted Stratum Cloud implementation that uses an Entra Application Proxy (Entra Identity), send an email to CustomerSupport@silvon.com.



After clicking OK in the settings window shown above, the add-in will connect to Stratum and provide informational messages to tell you the connection is in progress and tell you when it's completed. When you see the Connection Completed message, click the Continue button to proceed with getting, uploading, or refreshing data.



Best Practices

Always Have The Grid Displayed In The View

Stratum views can be set up such that their grid is hidden, for example, in cases where there is a chart and you only want to display the chart. Avoid using views like that where the grid is hidden from display. Charts also aren't recommended for views you plan to use with the add-in. The raw data from the grid is the focus when an Excel worksheet is created from a Stratum view. Keep the grid visible for the sake of easy viewing by users.

Don't Delete Views Used With The Add-In

Deleting a view in Stratum that has previously been inserted into Excel via the Stratum Connector for Excel add-in will disrupt the supply of data to your Excel file. Error messages about not being able to get View XML detail will display in Excel when it attempts to refresh applicable worksheets because the view data doesn't exist anymore. Avoid deleting views in Stratum that have been inserted into Excel.

Flat Tabular Data - Consider Using Levels Only On Rows

Many of Excel's features, such as PivotTables, Charting, AutoFilter, and the Subtotal feature, were designed to work with flat data. A Stratum view with levels on only one axis is ideal when used with Excel. The resulting table contains flat tabular data that is less visually complicated and more straightforward to work. A view with levels on both rows and columns can still be used in Excel, but having levels on both axes creates a table with crosstab data that is more visually complicated and more difficult to work with in Excel.

Note: See also Don't Use Levels On Columns Due To Impact On Captions.

Learn About Stratum Data Import

If you plan on using the add-in to upload data, familiarize yourself with Stratum help content about Stratum Data Import. The add-in uses Data Import to map the excel data into Stratum during the upload.

Review the following data mapping topics from Stratum help. Their content teaches you about the Data Import mapping window used for Excel add-in uploads.

- Data Import Mapping Window
- Automatic Data Mapping & Import Configuration

Also see the Data Import <u>tips for worksheet and data setup</u>. The tips include how to set up an Excel worksheet so its contents can be easily mapped to data in the Stratum Data Hub during the upload and import process.

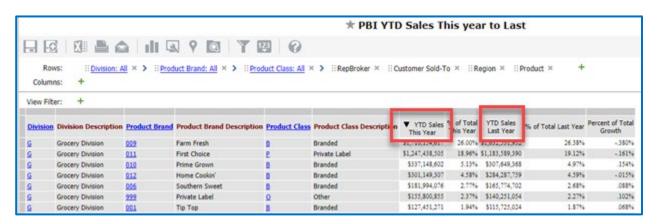
Create Captions For View Items Strategically

The Connector for Excel add-in uses the captions from Stratum views to create the captions for the resulting table created in Excel. Be strategic when setting up captions in views and be aware of things that influence how captions resolve in views.

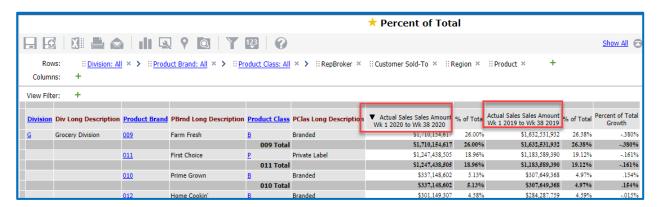
1. Favor Static Captions Over Dynamic

If you are going to use the table created in Excel to build other Data Connections (PivotTables, PivotCharts or other Tables), that will be refreshed, then use only static captions in your view. This will ensure that the Data Connections that use the table will continue to work when the Stratum data is refreshed.

For example, avoid using measure item captions that use time variables because time variables update as time passes. Define your measure item captions like the following where generic static text of This Year and Last Year are used to give time period info.



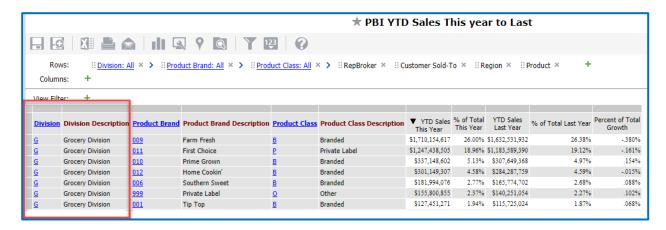
The above setup is preferred over the following when a view is used with the add-in. The marked captions below use time variables of "[From Period Short Desc] [From Year YY] to [To Period Short Desc] [To Year YY]" in the caption expression, and those variables will cause the caption to change each period.



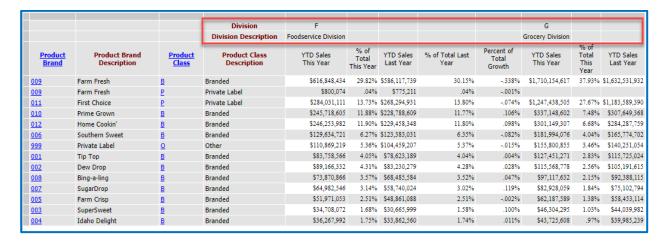
2. Don't Use Levels On Columns Due To Impact On Captions

When levels are on columns, the level value becomes part of the column name used by the add-in to identify columns. If level values get added or removed based on the data in the view, the associated captions would change in the view and could impact the view data already used by the add-in.

For example, define your view like the one in the next image where levels only exist on rows.



Rather than defining the view like this, which has a level on columns.

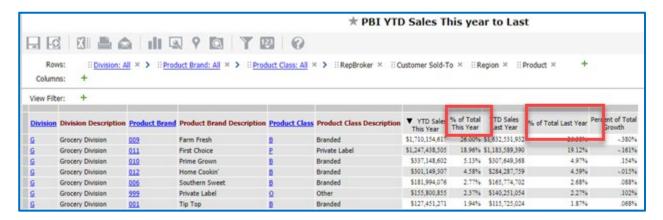


If you want your data to look like the above Stratum view when data is used in Excel reports, see the following topic later in this document: "Cross Tab Data - Can I Format Data In Excel To Have Dimensions On Rows And Columns?".

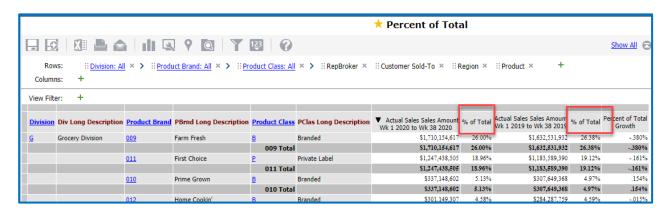
3. Assign Unique Captions To Each Item

Use unique captions for all items and avoid scenarios that would cause duplicates to occur when captions resolve in the view. View captions become column names when brought into Excel worksheets by the add-in. Having duplicate names will make the resulting data difficult to understand.

For example, define your captions like this:



Rather than this where two columns have the same name:



4. Avoid Captions That Resolve To An Empty String

The add-in will assign a generic column name to any caption that resolves to an empty string. For example, a generic name such as Column 1, Column 2, and so on. These names would make your resulting data difficult to understand.

Editing Worksheets Created By The Add-In

Data that the add-in brings into Excel exists in a table in a worksheet that has the same name as the view. Typically, you should not make any changes to these worksheets.

- Do not make changes to the table created by the add-in. The add-in's Refresh Stratum Data command deletes and re-adds the table.
- Do not change the table name created by the add-in. The table name is used to link back to the Stratum view.
- Do not add any text or data in columns or rows that exist after the table. If your data grows, that data can
 be overridden when you do a refresh. If you have to add text or data to a worksheet, do so by adding
 columns and rows before the table's starting point. When the table is refreshed, its starting location does
 not change, therefore columns or rows before that point will not be overridden.

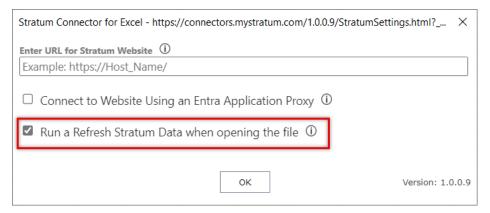
Name Views Strategically

Name the views you plan to use with the add-in so they are easy to search for when choosing from available views in the add-in's Get Stratum Data tab. Also name them in a way that indicates they are used with the add-in and that indicates to users that care should be taken when changing them in Viewer. For example, begin each name with initials such as "EC" or "CE" to represent they are meant to be used with Stratum Connector for Excel.

See also Don't Delete Views Used For Getting Data Into Excel.

Settings Related To Refreshing Data

The Refresh Stratum Data command kicks off a refresh of all Stratum data in an Excel workbook and a refresh of all other data in the workbook. Any Stratum data that was brought into the workbook via the Get Stratum Data command will get refreshed and then all other data from additional sources will get refreshed. You can arrange to have refreshes done automatically each time you open an Excel file by selecting the "Run a Refresh..." checkbox in the add-in's main settings window – that's the window where you specify the URL for the Stratum website to be used with Stratum Connector for Excel.



Notes:

If "Run a Refresh Stratum Data when opening the file" is selected, it is recommended that you do not select the "Refresh Data when opening the file" property for other data in the workbook. The add-in's Refresh Stratum Data command kicks off a refresh of Stratum data **and** all other data in an Excel file.

The "Run a Refresh Stratum Data when opening the file" features is not supported in Excel on the Web. All data refreshes must be done manually.

Stratum Views Used With The Add-In

When you are using the add-in to get data, a list of views from the specified Stratum environment shows in the Get Stratum Data tab. You can search by text in the view name then select a view to insert into your workbook. The list of views displayed once you connect to the Stratum Data Hub is determined by your user profile in Stratum.

- Stratum users who are View and Security Administrators will see all views from the Stratum environment.
- Stratum users who are Casual and Advanced Users will see their personal views plus all global and shared views from the Stratum environment.

Streamline Views To Focus On Their Raw Data

Stratum views are the suppliers of data for the add-in. When creating worksheets from views, only the raw data is captured. The add-in ignores report formatting or other special features applied in Stratum like conditional formats or charts. Any sorts and formatting needed for Excel worksheets can be set up in Excel once you've loaded up the raw data from your Stratum views. Knowing that, keep the following tips in mind when setting up views to be used with the add-in.

1. Do Not Use Sorts In Views

Use Excel to sort your data. Having a sort in the view can add to the data refresh times. There is typically no value in sorting the raw data.

2. Do Not Use Extras Like Charts, Conditional Format, Hyperlinks

Charts, conditional formatting, hyperlinks, pop-up labels, and Viewer formatting are excluded from views brought into Excel by the add-in. Skip using those types of items in views you plan to use with the add-in since the view's only purpose is to supply data to Excel. If your Stratum view does have conditional formats, pop-up text, or images defined for any measure items, you may see extra, meaningless data columns in Excel.

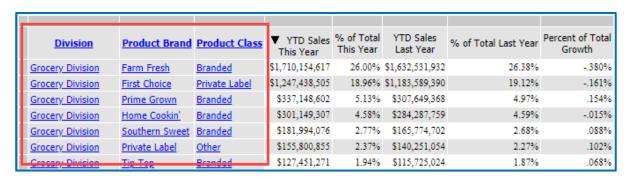
3. Leave Display Text Property For Levels Set To "Value"

The Display Text property for a level is ignored and the value is always used data brought into Excel by the add-in. When building a view for use with the add-in, consider leaving Display Text set to the default of "Value". You can include any attribute relationships as additional columns in the view.

For example, set up the view like this:



Rather than setting it up like this:



4. Considerations When Using All Others In Views

Filtering related features can be set up in Excel itself when data is used there, so All Others aren't necessary in the source view. If you really need All Others in your dataset, then exclude attribute relationships from the view. All Others will be ignored and excluded from a dataset when the source view has All Others AND attribute relationships on its rows.

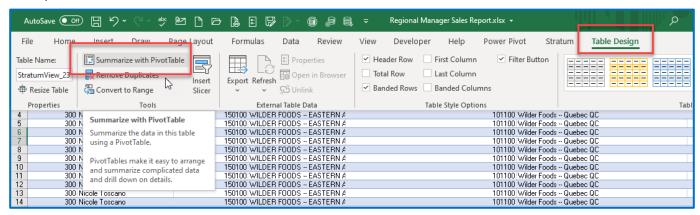
5. Considerations When Using Totals In Views

Totals can be calculated in Excel itself when data is used there, so totals aren't necessary in the source view. If you really need totals in your dataset, then exclude attribute relationships from the view. Totals will be ignored and excluded from a dataset when the source view has totals AND attribute relationships on its rows.

Using PivotTables / PivotCharts To Create Formatted Reports

If you are building a workbook that will be refreshed with current Stratum data, consider using PivotTables and PivotCharts to format your Stratum data. To create a PivotTable from the table created by the add-in, right click on any cell in the table then click the "Table Design" ribbon in Excel. Then click the "Summarize with PivotTable" command. This will create a PivotTable based on your Stratum data that can be customized to meet your exact needs.

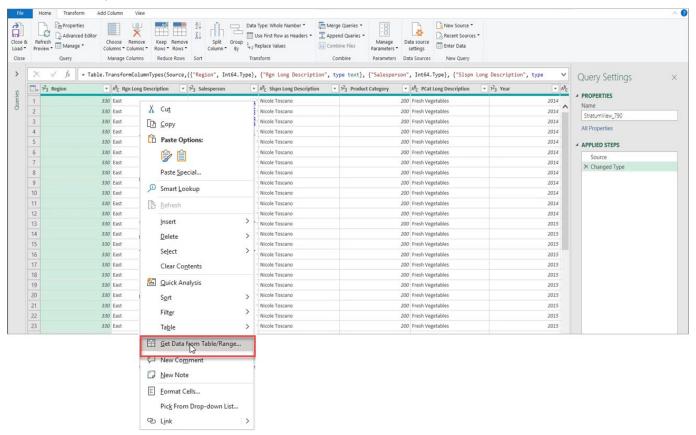
PivotTables and PivotCharts will be refreshed with current Stratum data by the Refresh Stratum Data command that's part of the Stratum Connector for Excel add-in.



Using PowerQuery To Create Formatted Reports

If you are building a workbook that will be refreshed with current Stratum data, consider using PowerQuery to format your Stratum data. To access Power Query from the worksheet and table created by the add-in, right click on any cell in the table then select the "Get Data from Table/Range" option. This will open the PowerQuery Editor that can be used to create another table that can be customized to meet your exact needs.

Tables created using PowerQuery will be refreshed with current Stratum data by the Refresh Stratum Data command that's part of the Stratum Connector for Excel add-in.



Note: If you are using Excel on the Web, use care while using PowerQuery due to limited functionality with Excel on the Web. Consider using Excel 365.

Other Topics & FAQ's

Can I Use The Same View More Than Once In Same Workbook?

No. Only use the same view once in any given workbook. If you insert the same view again, doing so replaces the worksheet and table created the last time the view was inserted.

Can I Use Views From Multiple Stratum Environments?

Not in the same workbook. Each workbook is meant to be used with a single Stratum environment.

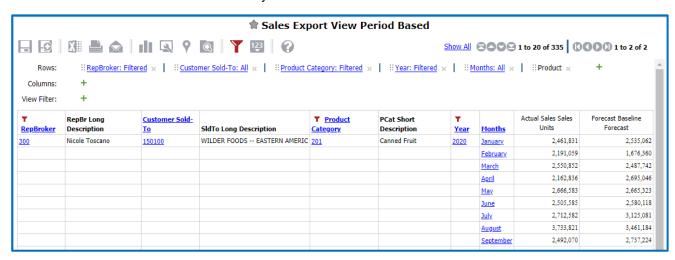
Can I Upload Multiple Worksheets At Once?

Only the first worksheet of the Excel file is uploaded to the Stratum Data Hub. That is so you can properly map data as you upload it. If you have multiple worksheets in an Excel workbook, the upload command will automatically upload just the first worksheet.

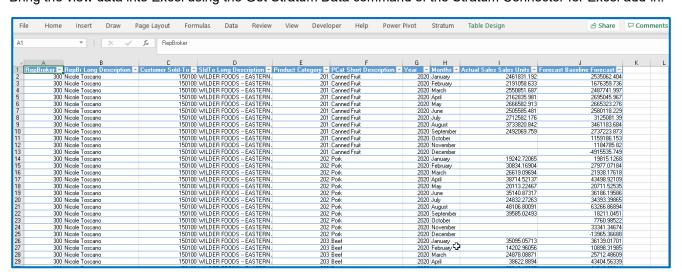
Cross Tab Data - Can I Format Data In Excel To Have Dimensions On Rows And Columns?

Yes, here's how to accomplish that data configuration in Excel:

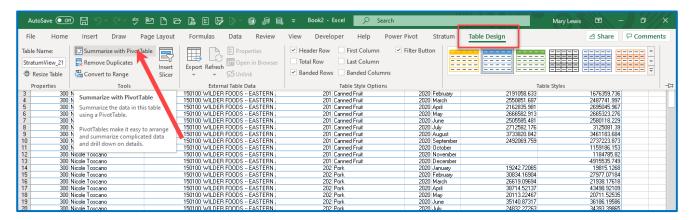
1. Create a Stratum view with dimensions only on rows. This will create a table with flat data.

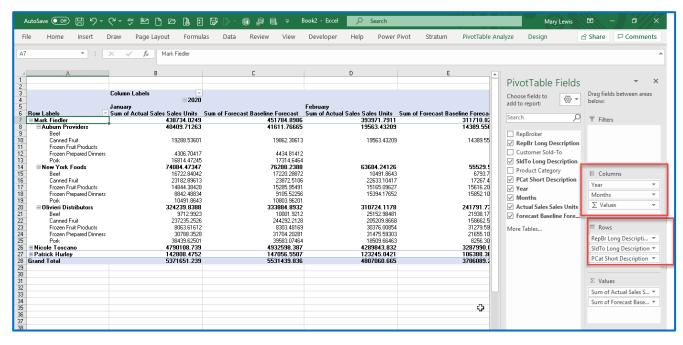


2. Bring the view data into Excel using the Get Stratum Data command of the Stratum Connector for Excel add-in.



3. Then use PivotTables or PowerQuery to format the data to meet your needs. You can move any dimension field(s) to columns to create a Crosstab report.





How Do I Adjust Stratum Website URL Or Other Main Settings For Stratum Connector for Excel?

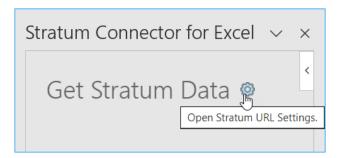
Adjustments are made in the main settings window. This window is where you specify details such as the URL of the Stratum Website used to get data, refresh data, or upload data. If you need to point the workbook to a different website, access the settings window and change the URL property. Also use that property to update the URL if a change in your implementation caused the Stratum URL to change (for example, the server location of the environment changed or your implementation changed from an onsite to Stratum hosted implementation).

Here's how to open the main settings window to adjust any settings in it.

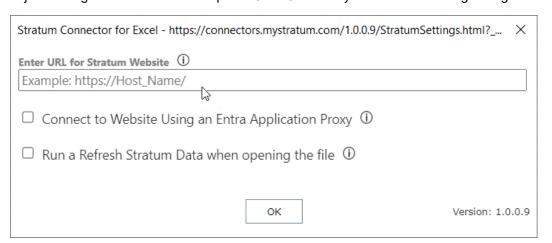
1. Click the Get Stratum Data icon in the add-in toolbar (skip to Step2 if the Get Stratum Data tab is already open).



2. Click the cog-shaped icon at the top of the Get Stratum Data pane.



3. Adjust settings in the window that opens. Click OK when you are done making changes.



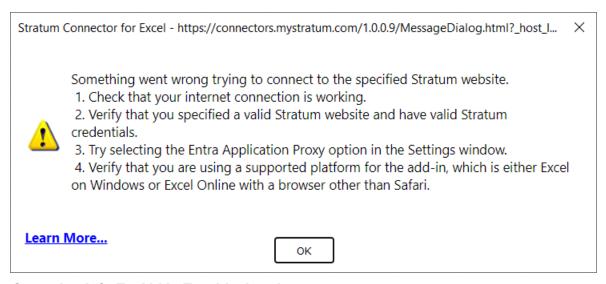
What Info Should I Gather When Troubleshooting URL, Connection, Or Other Issues?

The first list below summarizes tips to consider if you experience issues such as not being able to connect to Stratum data or get general messages indicating there could be an issue reaching the URL of the specified Stratum website. If you need to reach out to your Stratum administrator or Silvon for additional support, see the second set of tips which includes capturing screenshots of key messaging and info from Stratum Connector for Excel to share with anyone assisting you.

General Troubleshooting Tips

If you have issues getting up and running with Stratum Connector for Excel or receive a message such as the one below, here are a few things to check:

- 1. Verify that the Stratum website being used is at version 7.3 or greater (you can look that up in the About Stratum window of Stratum.Viewer). Verify you meet other Stratum licensing, Excel, and browser requirements outlined at the end of the Things To Know Before You Get Started section of this document.
- 2. Verify your internet connection is working. If you use a VPN, also verify your VPN is running okay.
- 3. Verify that the URL you specified for the Stratum website doesn't have any typos in it. Copy the URL into a browser and see if you can access it via your browser.
- 4. Verify you have proper credentials (a Stratum. Viewer user profile) to access the Stratum website you specified.
- 5. If you have a hosted Stratum Cloud implementation, access the add-in's settings window where you specified the Stratum website URL and try selecting the "Connect to Website Using an Entra Application Proxy" option. For hosted implementations, you must select that option in the add-in.

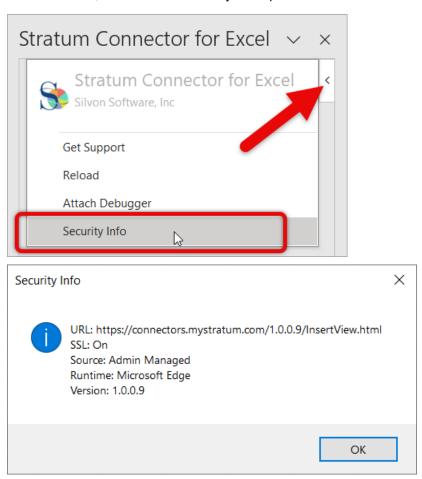


Capturing Info To Aid In Troubleshooting

If you ask for assistance in troubleshooting an issue, capture and share images of any messaging and the Security Info window to share with the person who is assisting you.

- 1. Provide them with the URL for the Stratum website you are trying to use with Stratum Connector for Excel.
- 2. Capture screenshots of messaging that shows while using Stratum Connector for Excel.
- 3. Capture a screenshot of the Security Info window in Stratum Connector for Excel. Access it as follows*.
 - a. If you don't have one of the add-in features open already, click the Get Stratum Data, Refresh Stratum Data, or Upload Data To Stratum commands so their applicable panel shows in the right side of Excel.

- b. Hover over the upper right corner of the panel area so an arrow displays.
- c. Click the arrow, then click the Security Info option from the menu that displays.



*Note: If you are using Excel on the Web, the Security Info window will not be accessible. You need to switch to your desktop instance of Excel to see it.

What Happened To Totals From My Original View?

If your Stratum view had totals AND attribute relationships on its rows, the totals will be ignored and excluded when the add-in creates the Excel worksheet from the view. Silvon recommends excluding totals from views you plan to use with the add-in. Totals can be calculated in Excel itself when data is used there, so totals aren't necessary in the source view.

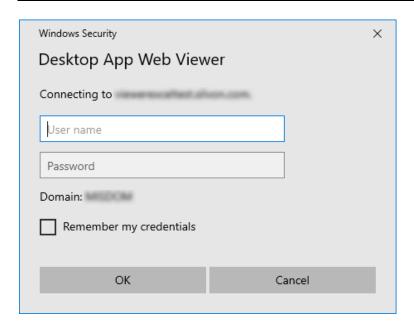
What Happens During A "Refresh Stratum Data"?

The Refresh Stratum Data command kicks off an update or refresh of all data in an Excel workbook that comes from data sources connected to the workbook. Stratum data that was brought into the workbook via the Get Stratum Data command will get refreshed and then all other data from other sources that feed data into the workbook will get refreshed.

What Info Should I Enter In Windows Security Prompt?

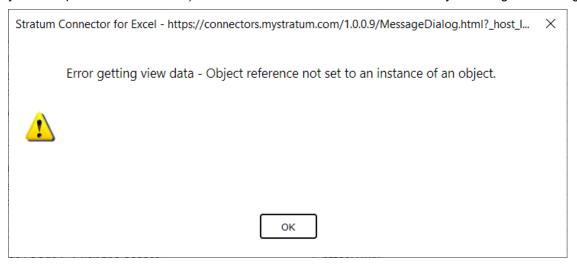
The following window shows in some cases* when the add-in needs to connect to the Stratum Data Hub to get, upload, or refresh data. Enter the Windows user name and password that you use when signing onto your Stratum environment. The credentials are used to access data in the hub or send data to the hub.

*Note: If you have a hosted Stratum Cloud implementation, you will not get this type of prompt. Your Entra Identity will be used to access the hub via the add-in when getting, uploading, or refreshing data. See also "Connection Settings For A Hosted Implementation".



Why Am I Seeing An "Error Getting View Data" Message?

You will see this message if the view you selected to get data from doesn't have rows of data to return. That could be due to there being no data in the view or the data that's in the view is not available to you based on your Stratum user profile. Select a different view from the Get Stratum Data tab or edit the selected view definition in Stratum (if you have permissions to do so) such that the view returns data and then try selecting the view again in Excel.



Why Are Repeating Values Included In A Power BI Dataset & Reports?

Repeating values are used for every dimension when you bring view data in Excel even if repeating values are disabled in the original Stratum view. Repeating values aid you in understanding and working with the data in the Excel framework.

Why Are Some Calculated Measure Items Missing?

This happens when the source Stratum view has both attribute relationships AND distinct calculated measure items on rows in the view. In those cases, the distinct calculated measure items will not be loaded into the Excel worksheet that was created from the view.