Data Exchange Module

Spectrum Office Add-in

Last revised on: August 12, 2021

CONTENTS

SPECTRUM OFFICE ADD-IN

Viewpoint created a Data Exchange module to provide a secure, quick, and easy way to transfer data into Spectrum Construction Software. The module contains three components that streamline time-consuming data entry processes via a secure Web connection. The Spectrum Office Add-in component provides the following benefits:

- It uses an Excel®-based template.
- Each Web service has a template that can be used to bring data into Spectrum.
- Each Web service is defined with specific requirements and validation rules for field names.
- Each template can be customized and stored for individual users.

To use the Spectrum Office Add-in, the Data Exchange module must be active, the Authorization ID must be defined, and the Spectrum Office Add-in must be installed on the user's local computer. If multiple people use the computer, then we recommend that the add-in programming be stored in a central location that all users can access.

*****NOTE: The Spectrum Office Add-in needs to be reinstalled after each Spectrum service pack or release using the current MSI installer.***

To create an Authorization ID, please see the Spectrum Help, *Data Exchange Authorization Setup*. For assistance with the Spectrum Office Add-in Installation, please contact your Spectrum systems administrator.

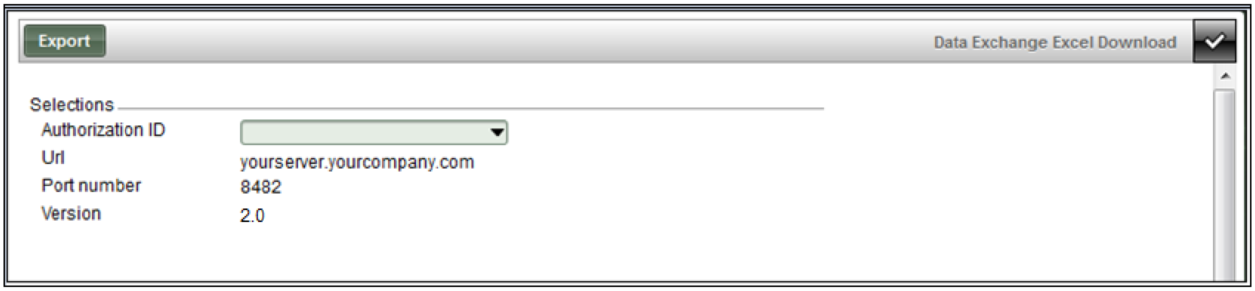
REQUIREMENTS

The Spectrum Office Add-in works with the following Software components:

- Microsoft® Office
  - Suite 2016
  - Office 365 – Full installation only. Not compatible with Office Online versions.
- Operating systems
  - Windows 10®
- Required Framework—this will be included in the installation, and requires internet access to load
  - .NET Framework 4.7.2
  - Microsoft® Visual Studio 2010 Tools for Office (VSTO) Runtime
- Programming for the Office Add-in must be stored on the user's local hard drive and cannot be stored on a network drive.
- The Spectrum Data Exchange Security/Authorization ID must be setup to allow access to Spectrum.

SPECTRUM DATA EXCHANGE DOWNLOAD

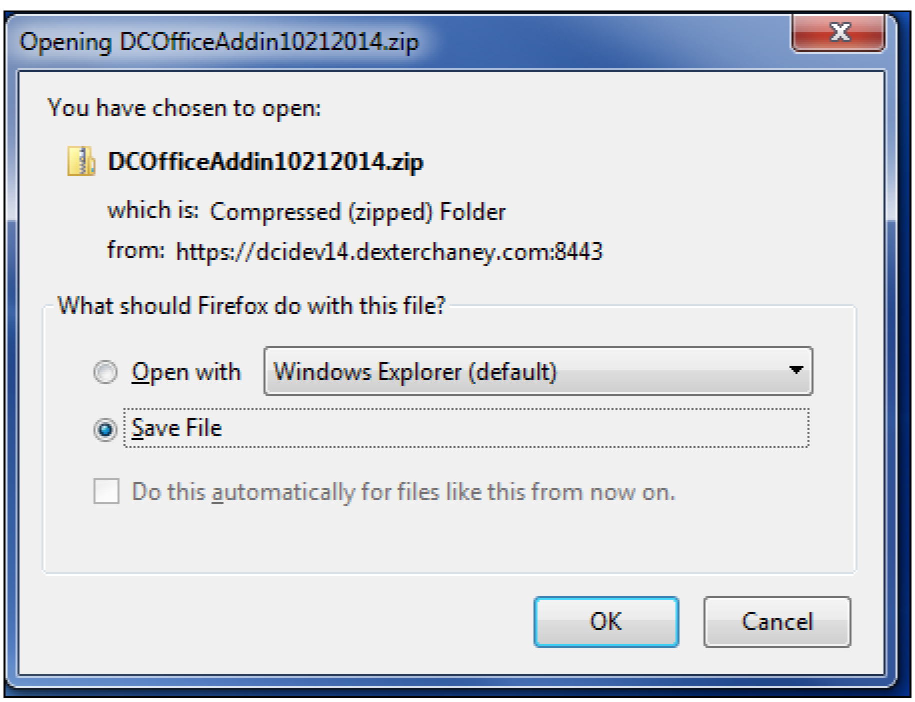
The Spectrum Office Add-in, which can be used in conjunction with the Data Exchange module, can be downloaded from the Data Exchange Download screen. Select System Administration > Utilities > Data Exchange Download to get to the screen.



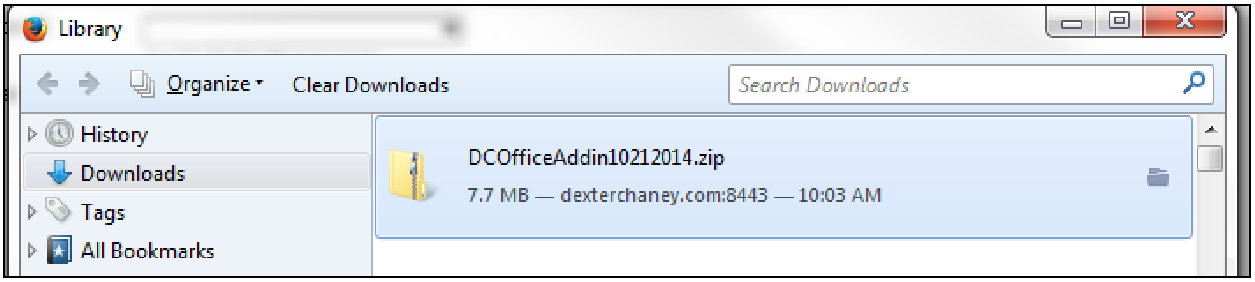
The Data Exchange Excel Download screen displays:

- The Authorization ID (optional)
- The URL defined for the company's server
- The Port defined for the company's server
- The Spectrum Office Add-in version number

Click **Export** to download the programming. The Opening window (shown below) displays and provides the option to either **Open With**—Windows Explorer (default) or **Save File**.

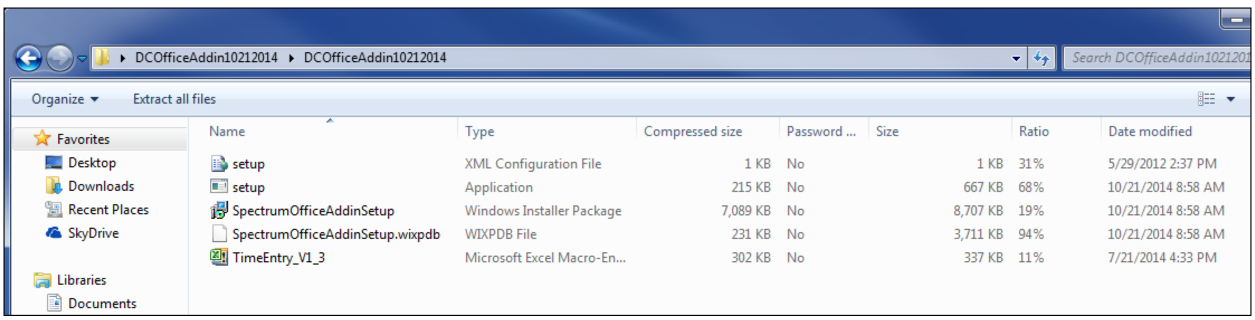


Select the **Save File** option and click **OK**. The user controls the location of where the file is stored. The Download window (shown below) displays the zip file for you to select.



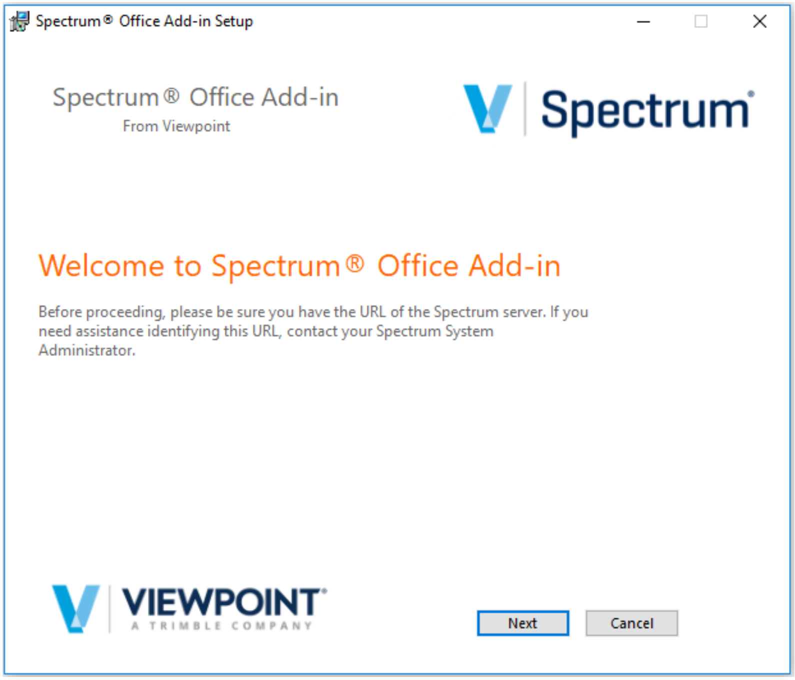
INSTALLATION

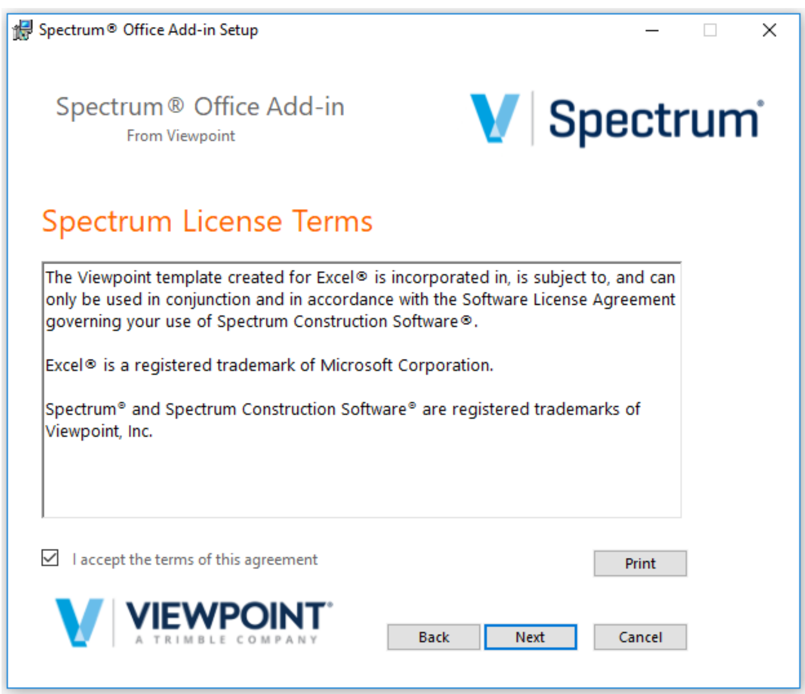
The downloaded zip folder contains the MSI Installer for the Spectrum Office Add-in. To install it open the zip file on the computer that will be using the Spectrum Office Add-in. The following files will display:



Click on the setup.exe file with the Type defined as Application. The Spectrum Office Add-in MSI installer checks the version and the Registry Editor logic to determine the type of installation that is needed. Follow the Spectrum Office Add-in installation screens and instructions shown below for the given types of installation.

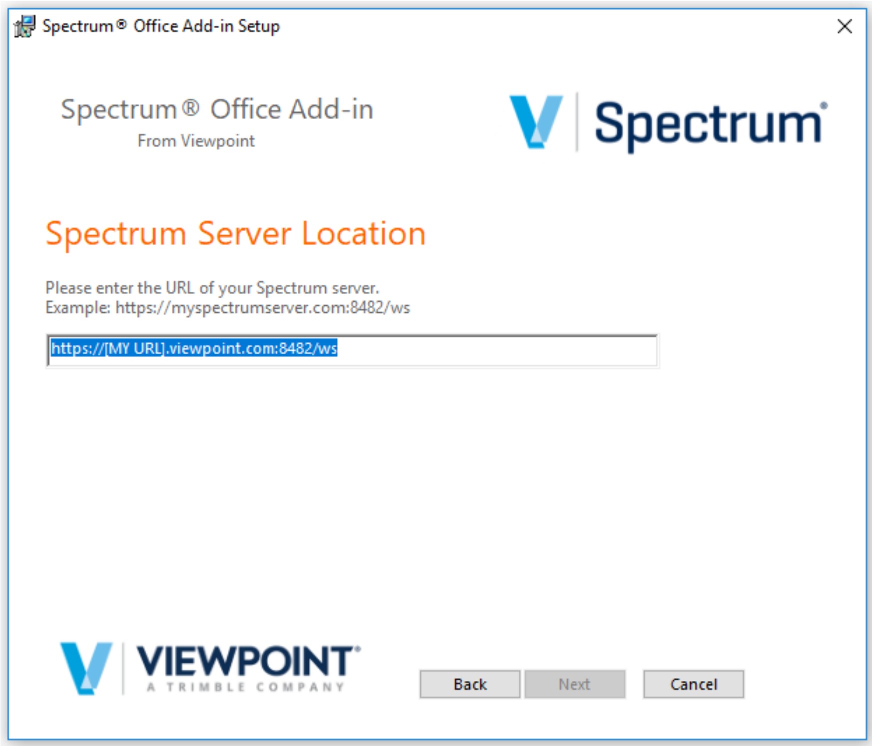
First Installation



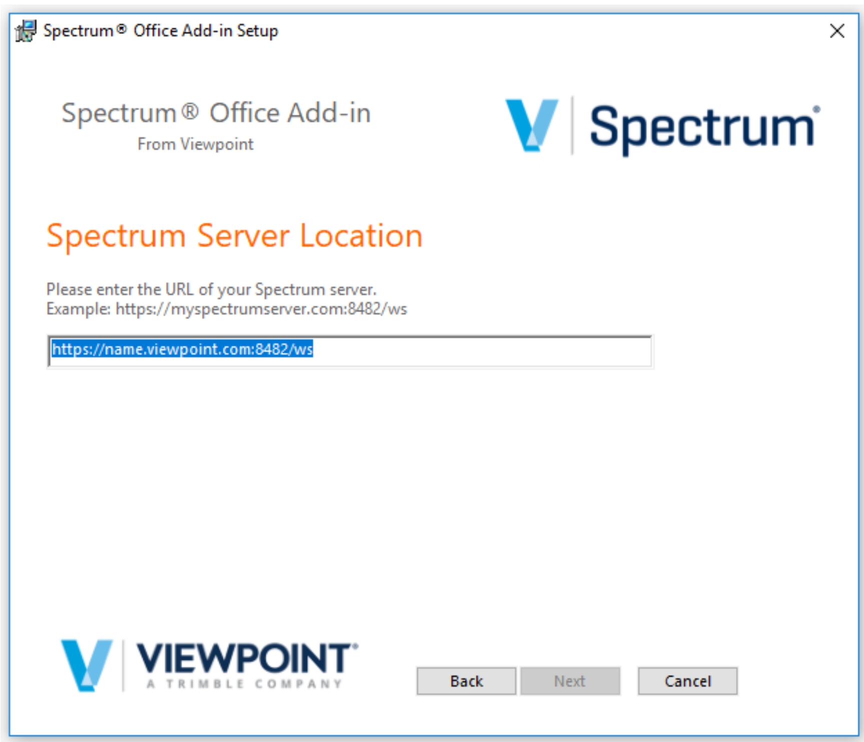


Replace the [MY URL] portion with your Server's URL here or use the default URL on the Spectrum Server Location screen.

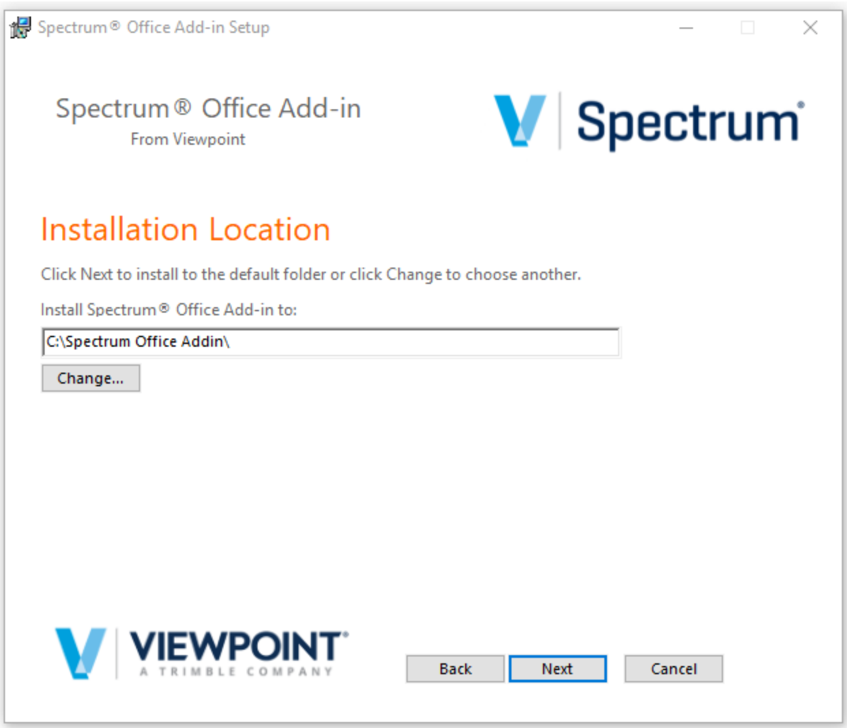
Default URL in MSI Installer



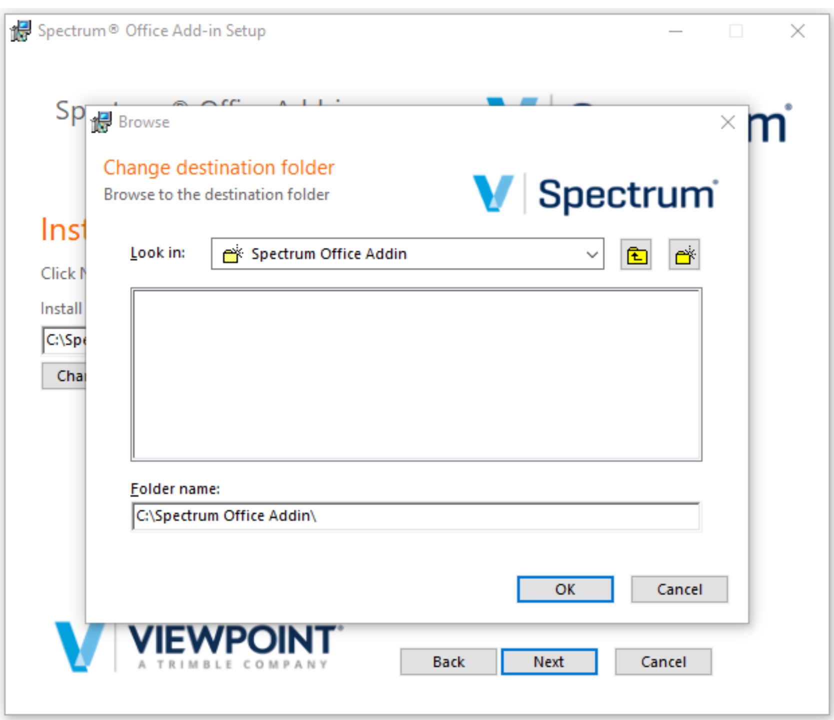
Modified URL entered into MSI Installer

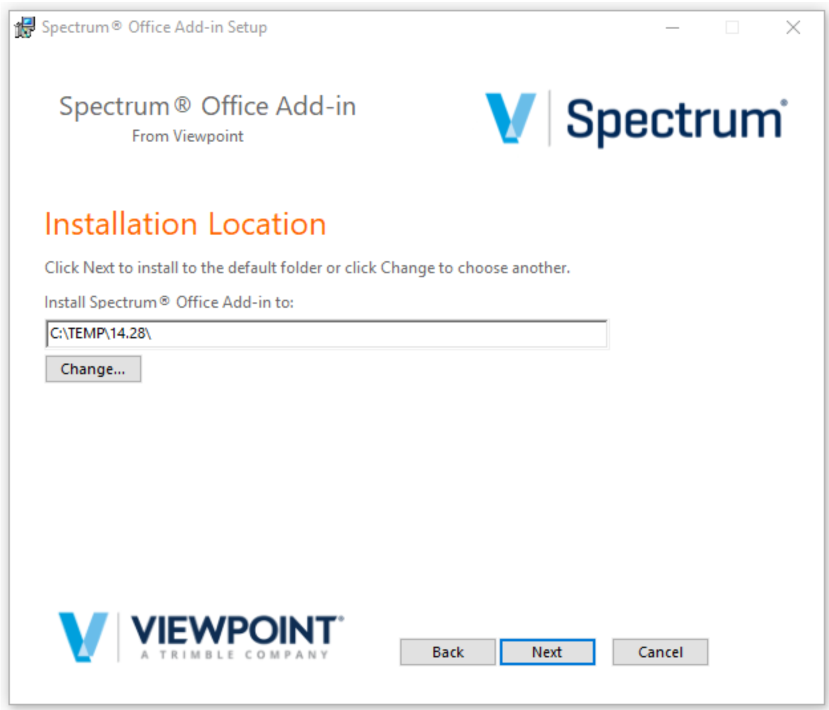


The Installation Location screen allows you to define where the programming will be stored on the local drive. The ‘default’ storage location is on the C:\ drive in a folder called Spectrum Office Add-in.

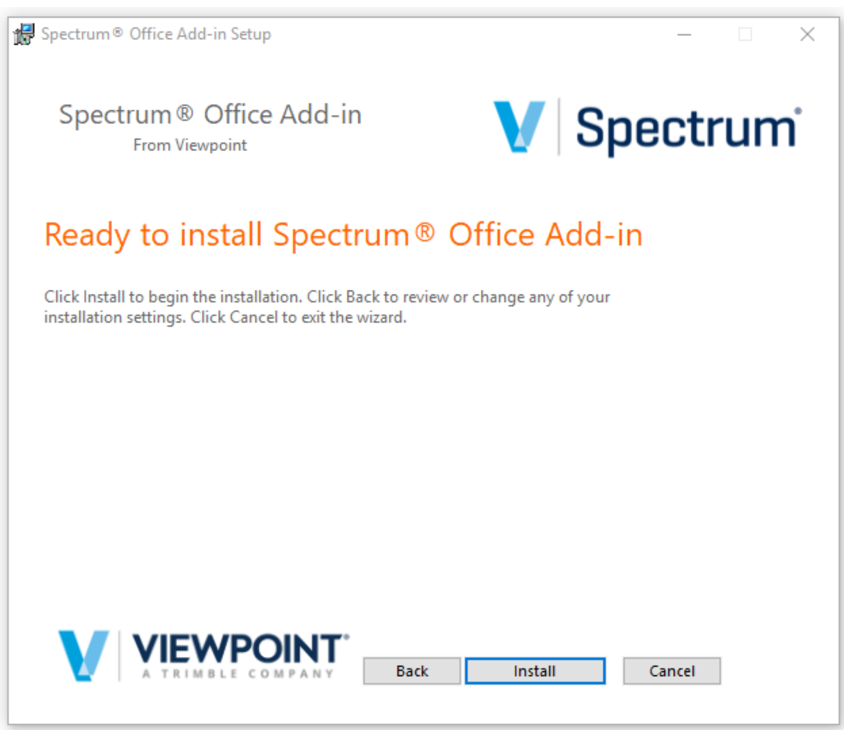


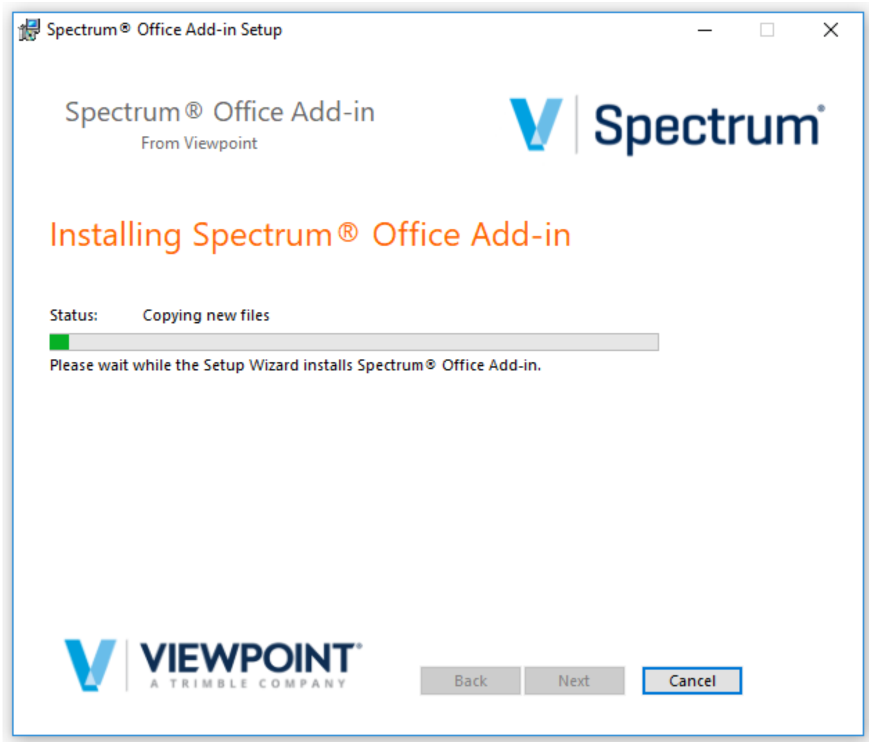
Click **CHANGE** to define a different location on the local drive.



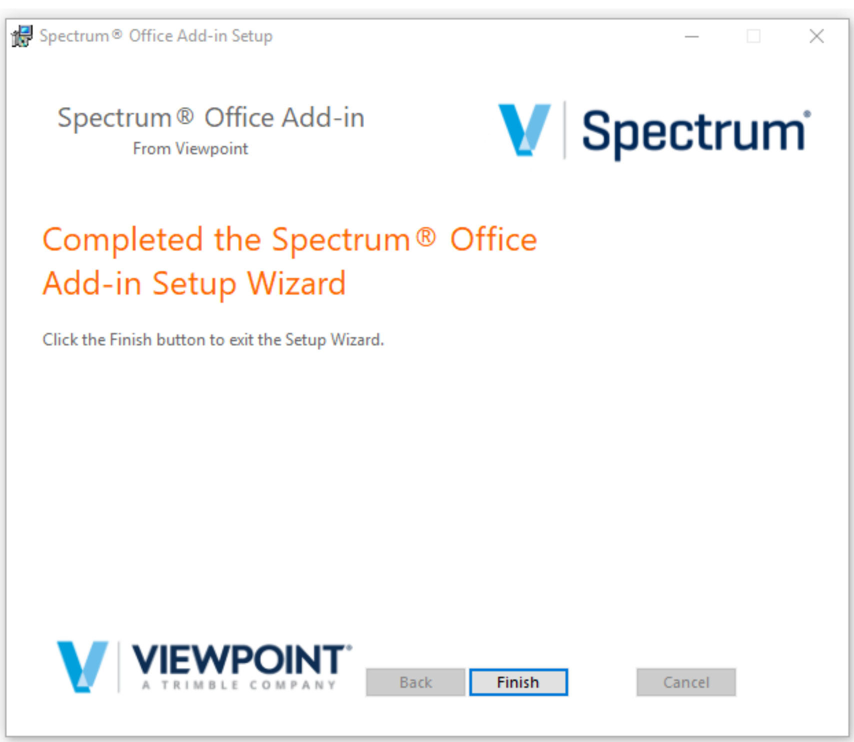


The MSI installer prevents you from defining a location that is **NOT** on the local hard drive.

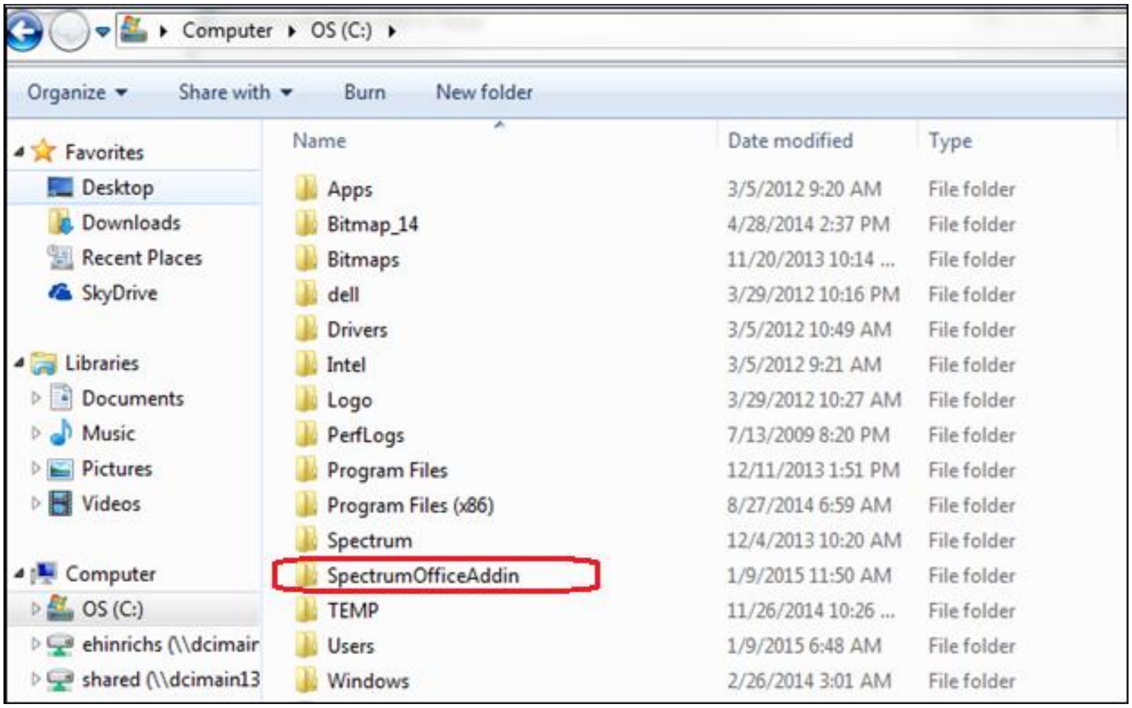




NOTE: installation will ask you to confirm the installation of the programming.

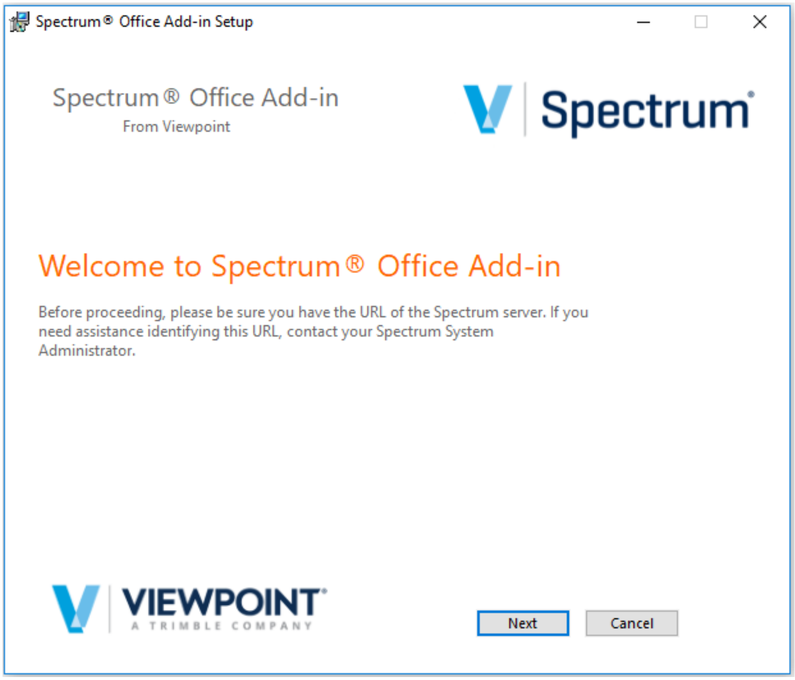


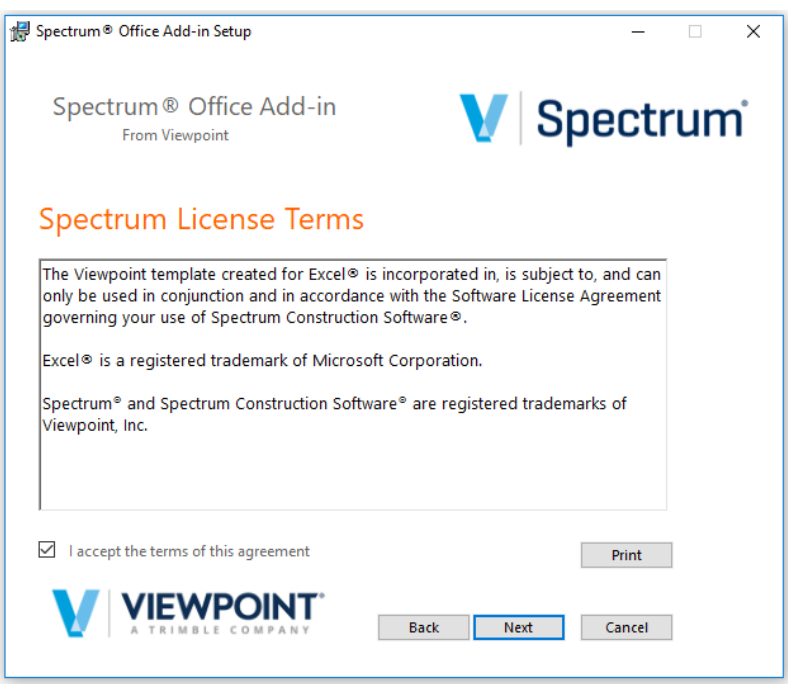
The Default Storage location is shown below.



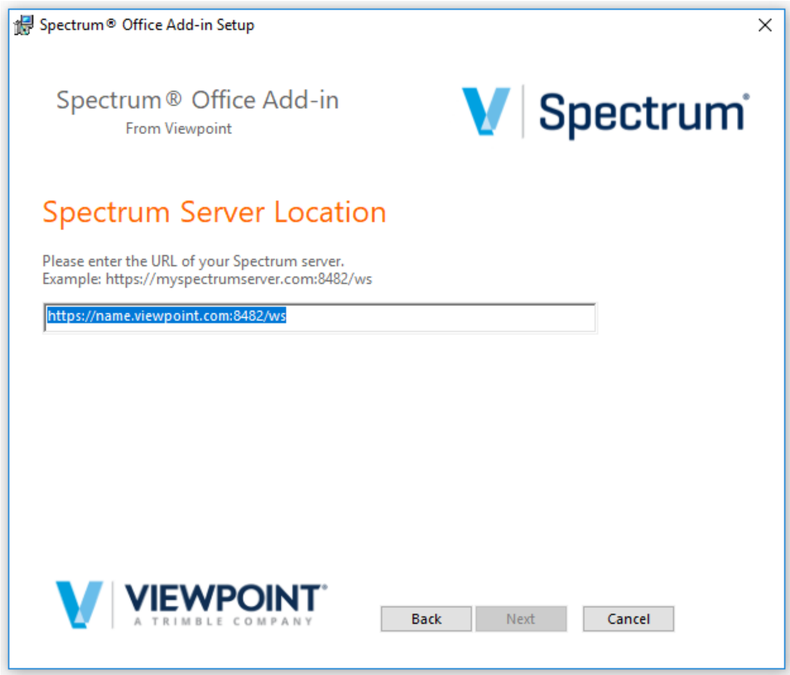
Service Pack Installation

When a new Service Pack is released a new Data Download file is available that contains the current Spectrum Office Add-in MSI Installer that needs to be installed. The installer checks the version and the Registry Editor logic to determine the type of installation needed. Follow the instructions shown below.

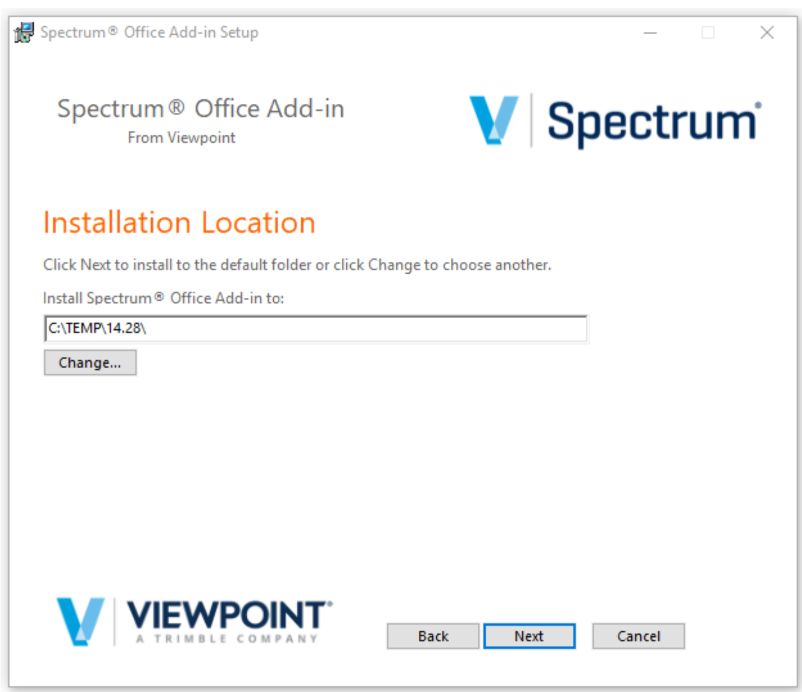




The Spectrum Server Location screen displays the existing URL currently stored on the computer. This can be modified.



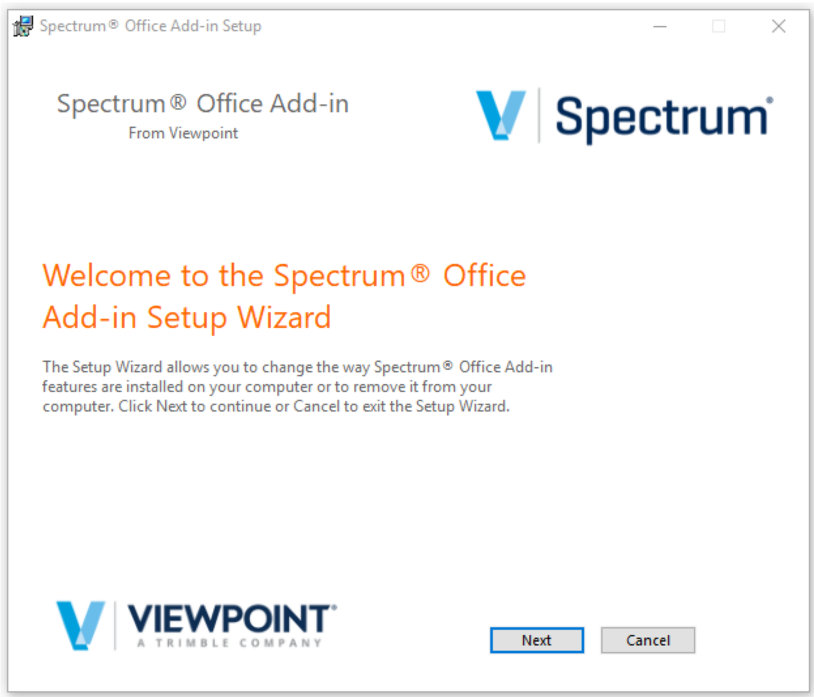
The Installation Location screen displays the existing path where the programming is currently stored on the computer. This can be modified.

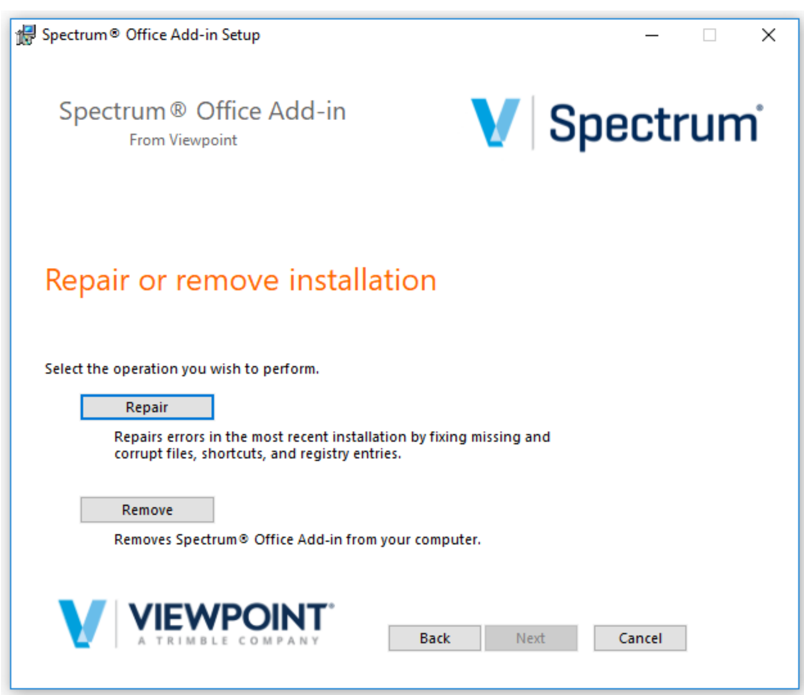


The Spectrum Office Add-in completes the installation process similar to the first time it is installed.

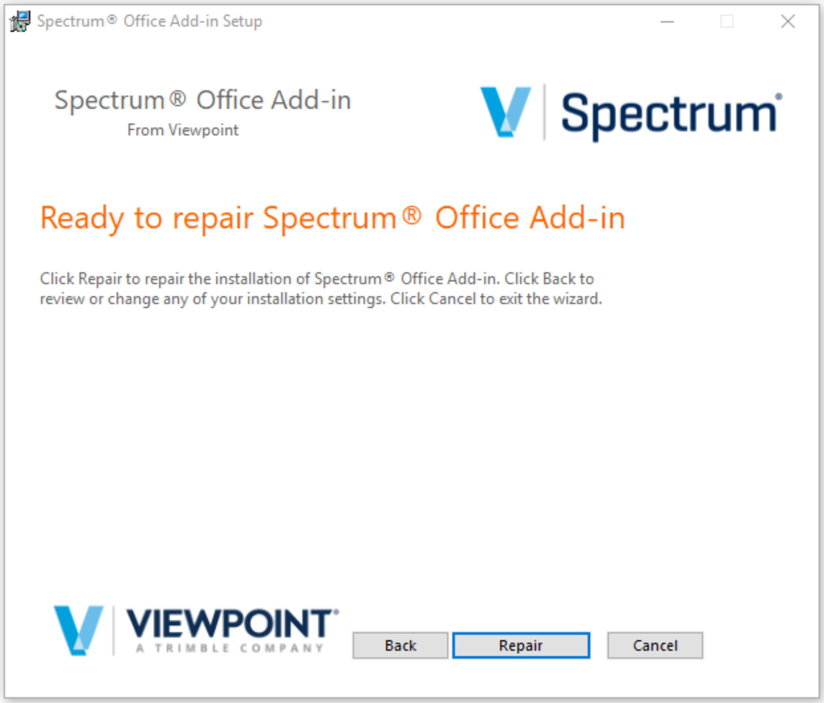
Other MSI Installer Features

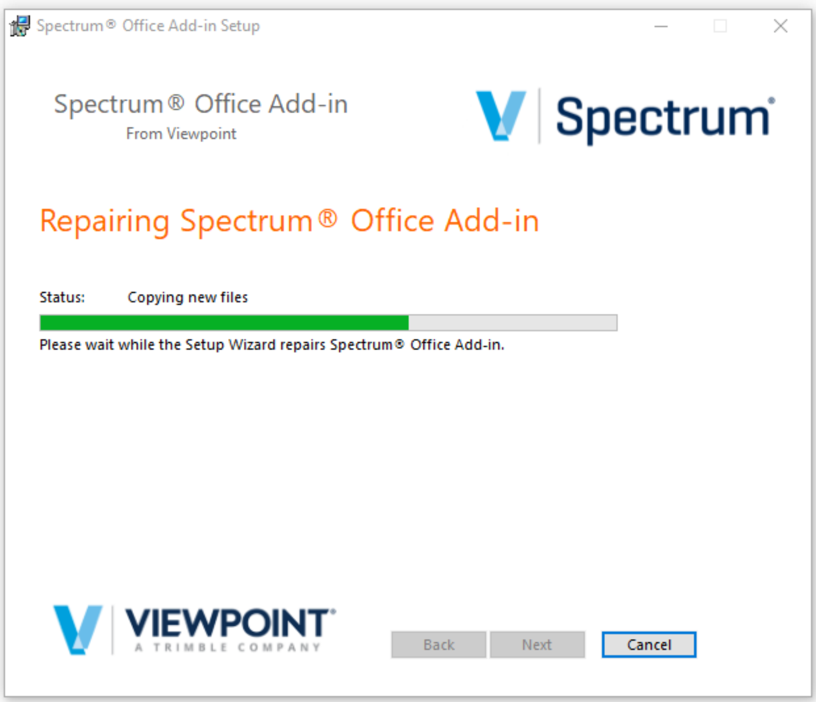
The Spectrum Office Add-in MSI Installer contains two other features--the ability to Repair or Remove a current installation of the Office Add-in. The installer checks the version and the Registry Editor logic to determine the type of installation needed. Follow the instructions shown below.

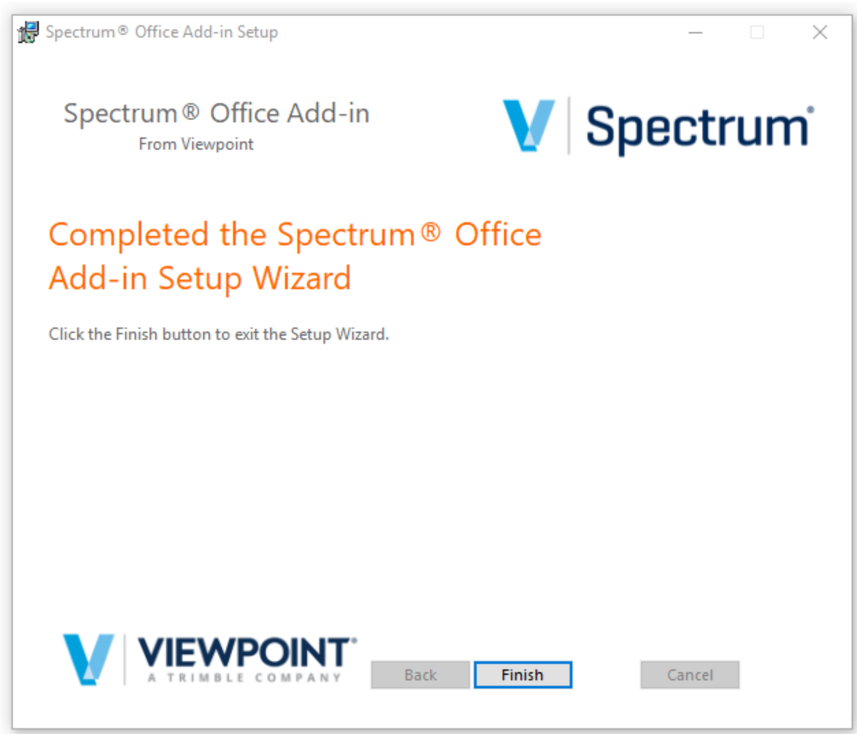




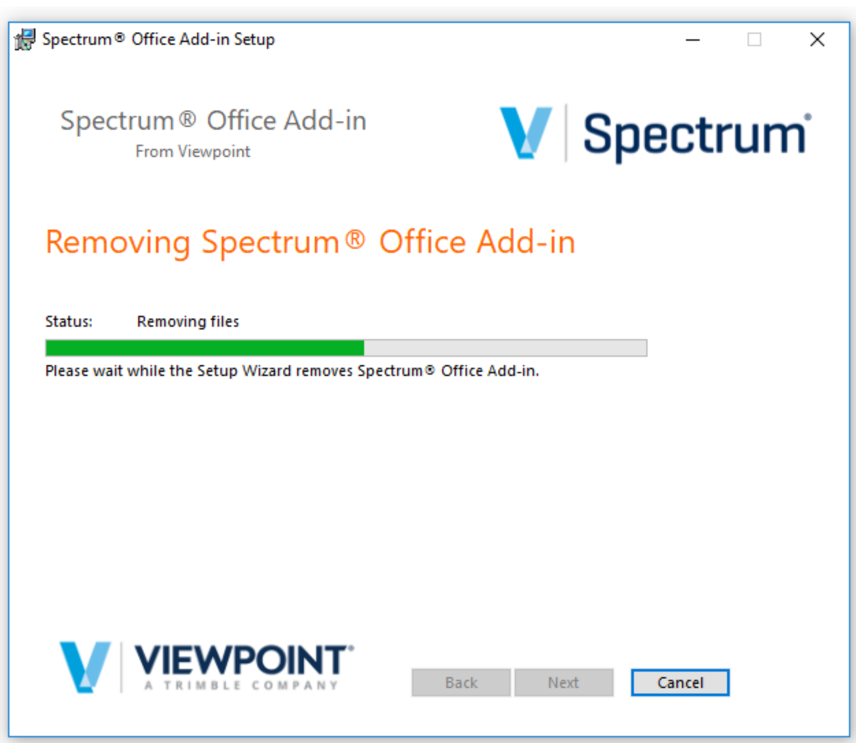
Click **Repair** to correct errors or update the programming with the current files.


Spectrum® Office Add-in Setup
Spectrum® Office Add-in
From Viewpoint
Spectrum
Ready to repair Spectrum® Office Add-in
Click Repair to repair the installation of Spectrum® Office Add-in. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.
VIEWPOINT
A TRIMBLE COMPANY
Back
Repair
Cancel

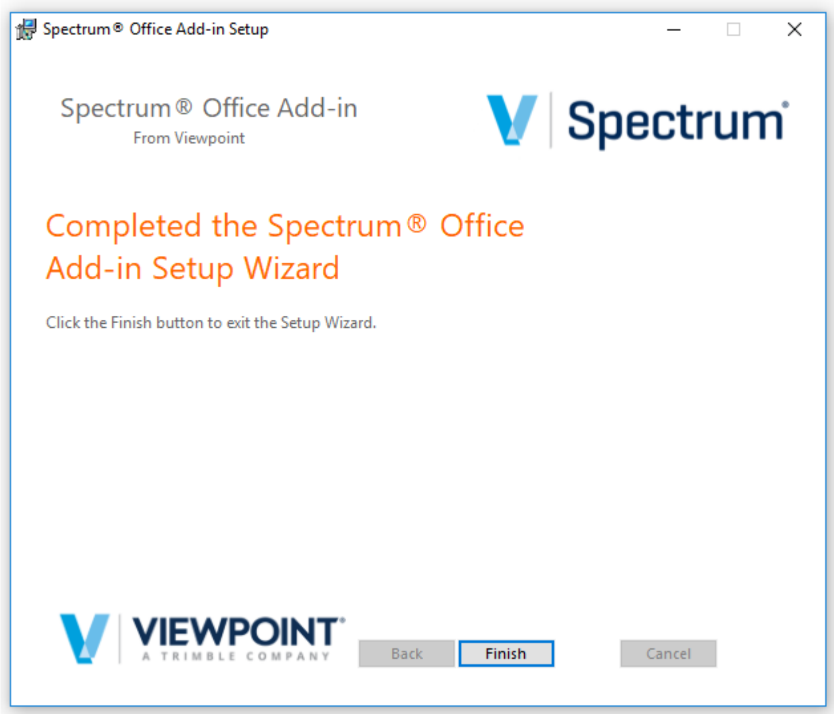

Spectrum® Office Add-in Setup
Spectrum® Office Add-in
From Viewpoint
Spectrum
Repairing Spectrum® Office Add-in
Status: Copying new files
Please wait while the Setup Wizard repairs Spectrum® Office Add-in.
VIEWPOINT
A TRIMBLE COMPANY
Back
Next
Cancel



Click **Remove** to remove the programming from the Spectrum.



NOTE: installation will ask you to confirm the removal of the programming.

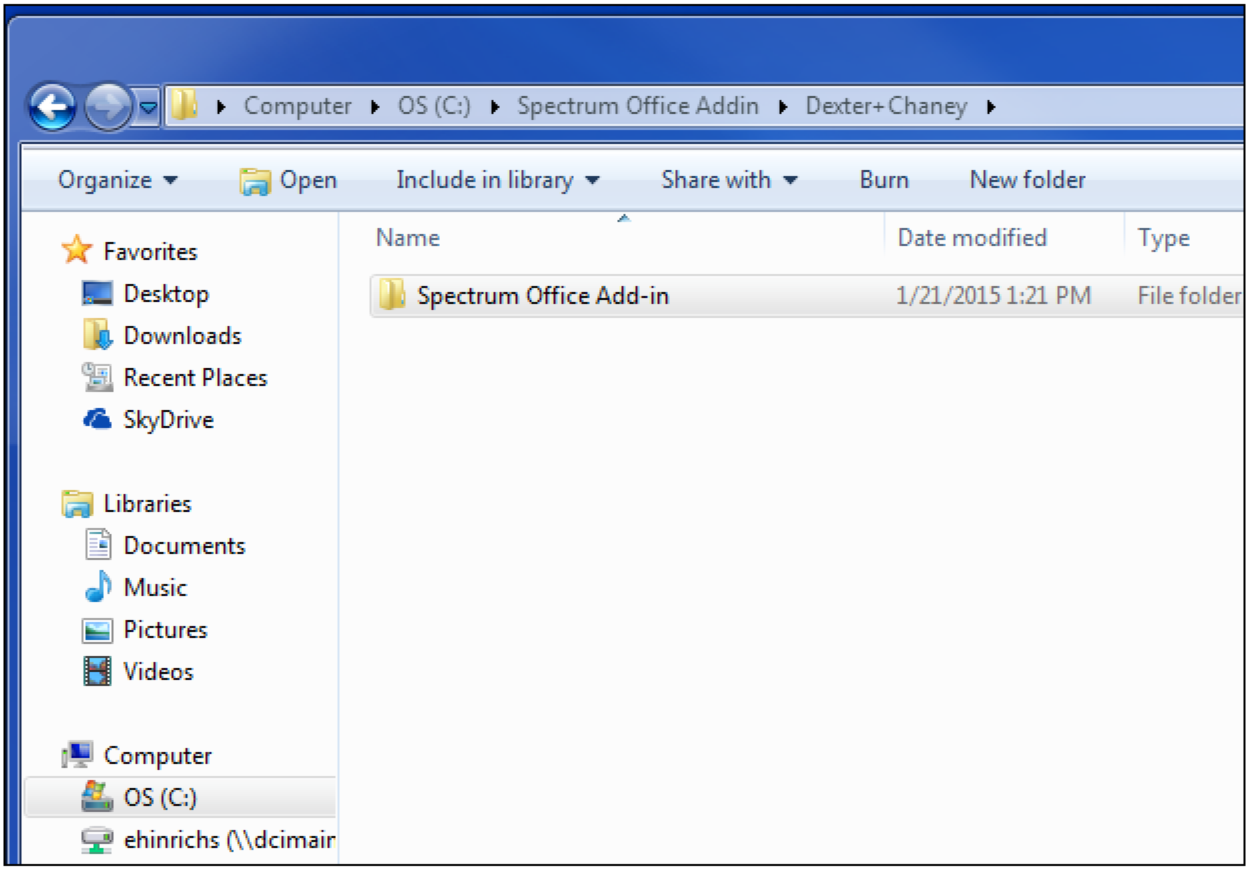


The Spectrum Office Add-in MSI Installer does not delete or move any files that are NOT contained within the Office Add-in Installer. Therefore, if a custom file (i.e., a modified version of a template, log files, or a Custom Template) exists then these files will need to be moved or deleted manually by you.

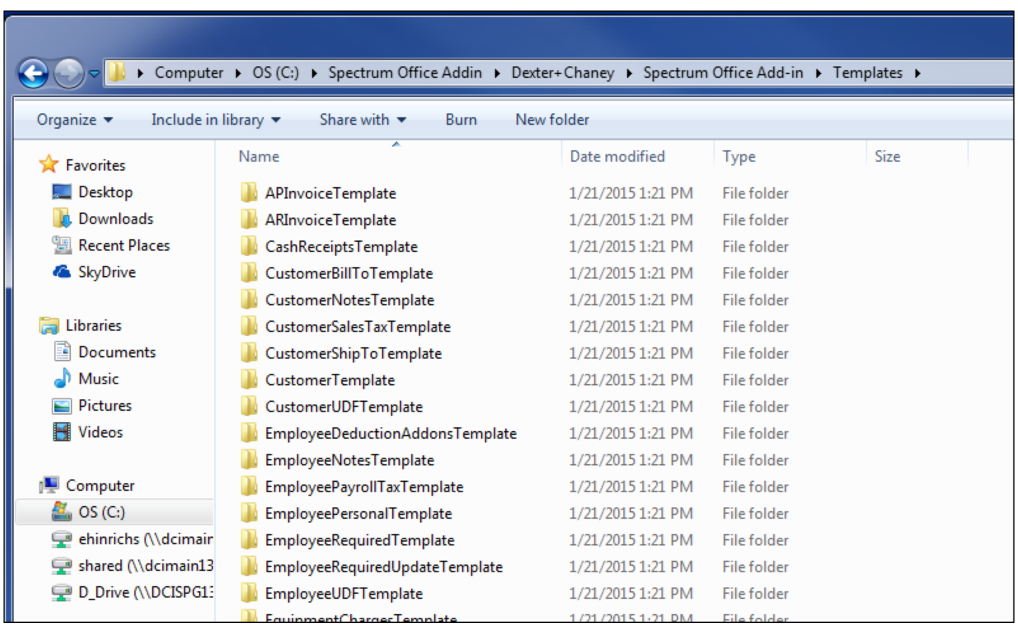
Once the installation is complete on the workstation, a new folder called *Dexter+Chaney* will be added to the computer's Registry Editor and the programming will be stored on the local hard drive using that same name.

*****NOTE: The Spectrum Office Add-in needs to be reinstalled after each Spectrum service pack or release using the current MSI installer.***

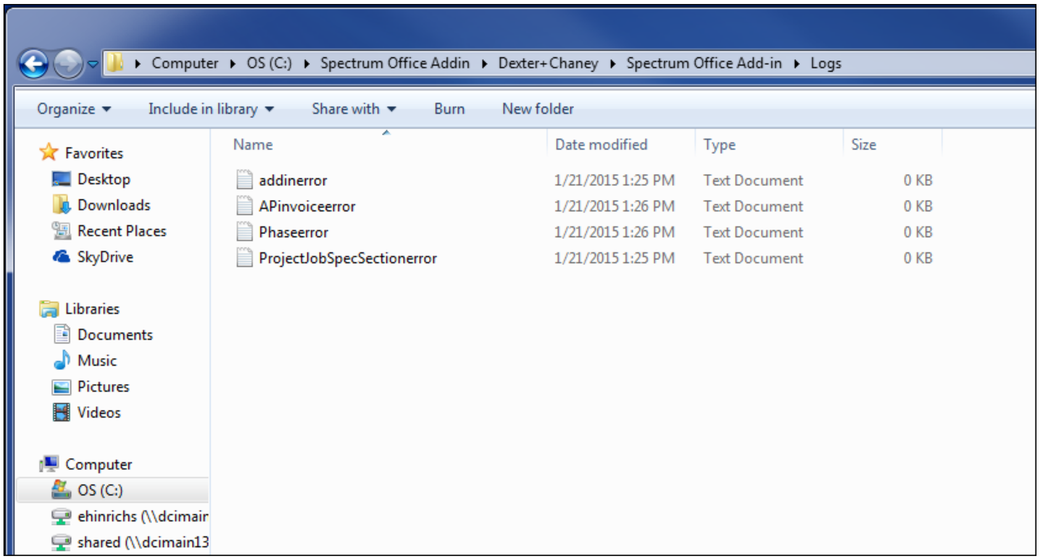
The Dexter+Chaney folder stores all the programming for the Spectrum Office Add-in and the programming for each Excel template in the defined location during the installation process.



Individual folders are created within the Templates folder to store the specific programming for each template. If anyone creates a custom version, then it must be stored within the specific Templates folder in order to work properly.



The Dexter+Chaney > Spectrum Office Add-in folder contains a Logs folder (shown below) that stores the individual Log files for each Web Service. These log files are created as a Web Service is sent to Spectrum. The logs are used for troubleshooting the different error messages and the data that was submitted. Occasionally these Log files need to be manually deleted due to the large quantity of data being stored based on the Web Service usage.



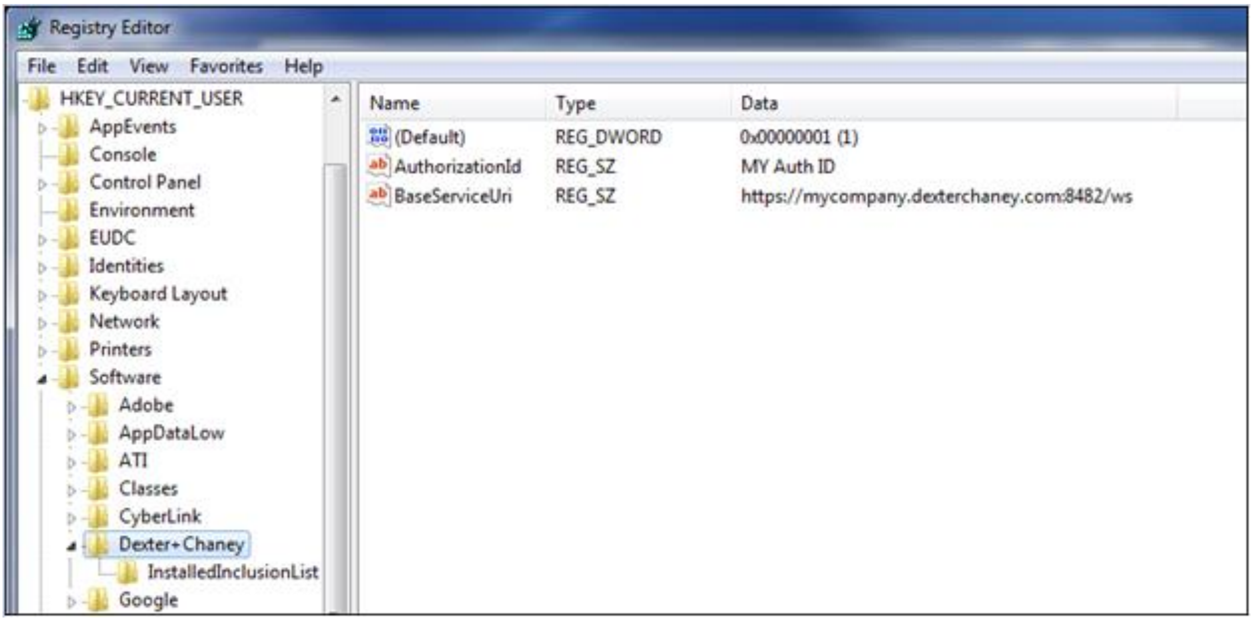
If the programming is deleted or moved to a new location on the hard drive and any Log files exist then these files will not be removed. They will need to be manually deleted.

Registry Editor

As shown in the example below, the new Dexter+Chaney folder is defined on the Registry Editor (regedit) to store user specific data only regarding the Spectrum Ribbon in Microsoft Excel. It is stored in the Regedit\HKEY_CURRENT_USER\Software\Dexter+Chaney which contains the following:

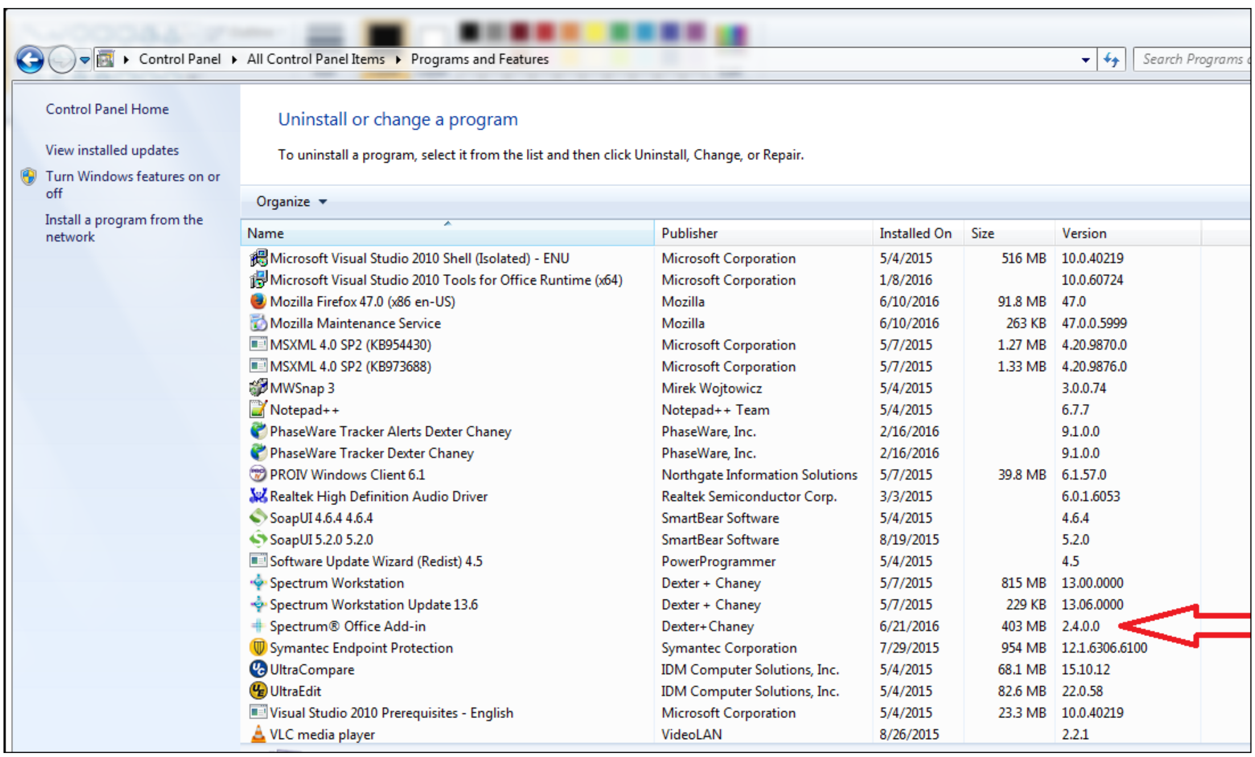
- The *AuthorizationId* contains the Authorization ID defined on the 'About' button within the Spectrum ribbon in Excel.
- The *BaseServiceUri* contains the Service URL defined on the 'About' button within the Spectrum ribbon in Excel.

A similar-named folder exists in the Registry Editor to track Spectrum's information. The information stored within the Registry Editor is specific to the individual software programming loaded on the computer.



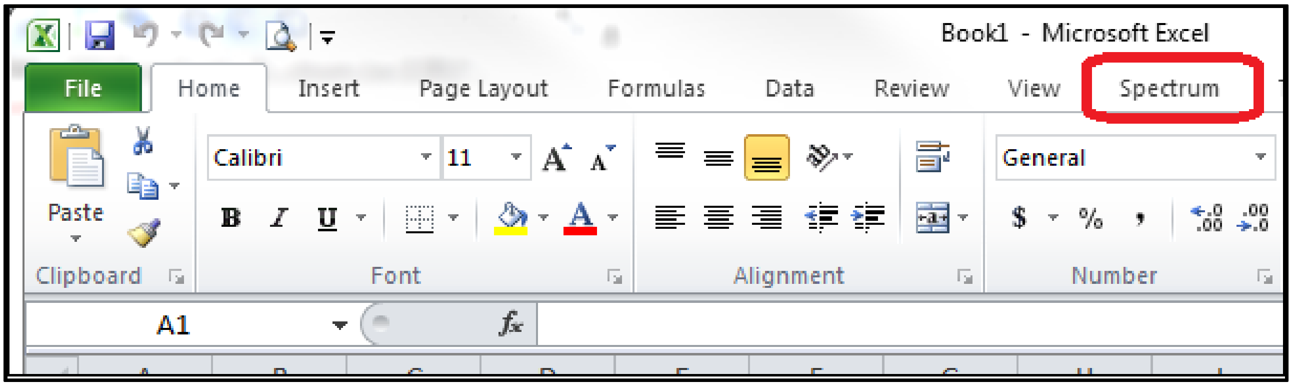
Control Panel on Computer

When you open the Control Panel on their Computer, a new ‘Spectrum Office Add-in’ program displays the current version of the installed MSI Installer.

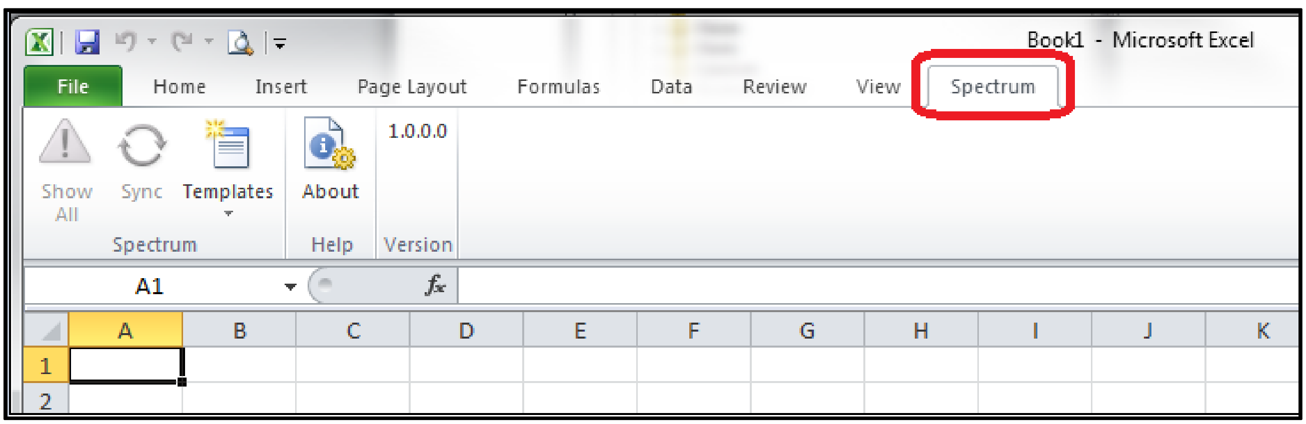


Microsoft Excel

When you open Microsoft Excel, a new Spectrum tab becomes available.



The Spectrum tab displays the options needed to use the Spectrum Data Exchange module.

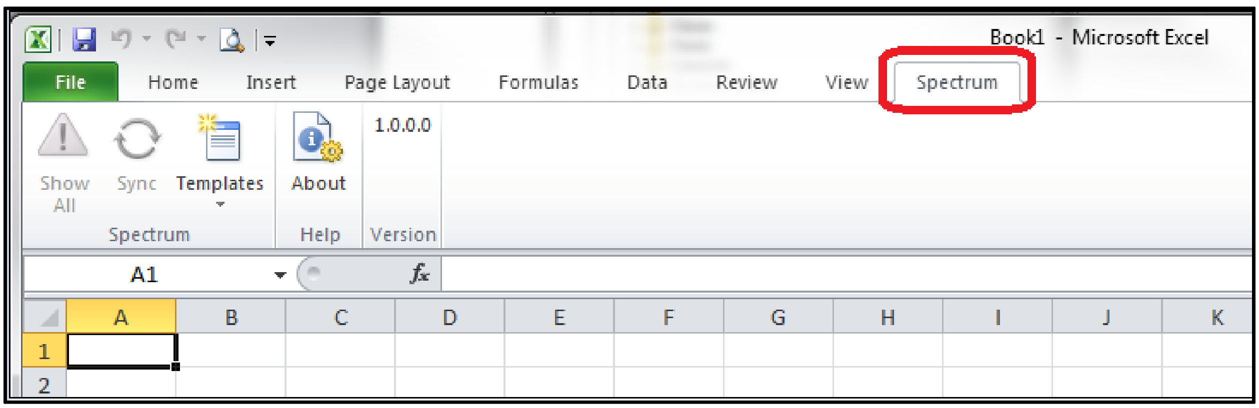


SPECTRUM OFFICE ADD-IN FUNCTIONS

To use the Spectrum Office Add-in component for the Spectrum Data Exchange module, you must first select the Spectrum tab in Excel. The Spectrum tab displays the version that is installed and provides the following buttons:

- Show All
- Sync
- Templates
- About

The **Show All** and **Sync** buttons are available when a template is active. To use the templates, click the **About** button and enter the Service URL and Authorization ID (Auth ID). The Authorization ID is created within the Data Exchange Installation screen. The Service URL is defined by the client and will be provided to users by their IT department or it may have been defined during the installation.

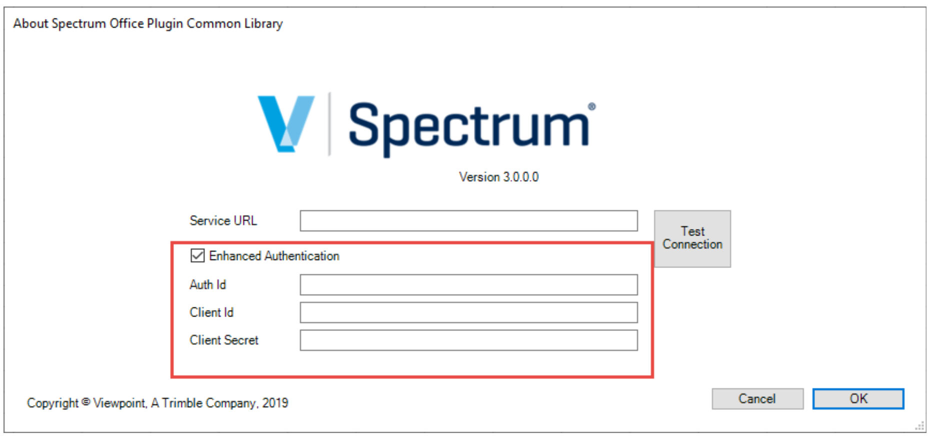


About Button

The **About** button in the Spectrum tab stores the Service URL and Auth ID that allows access to the Spectrum Data Exchange module.

- **Service URL** – The address for the company's Spectrum server along with the defined secure port number that is used to bring data into Spectrum.
- **Enhanced Authentication** – Select this checkbox when the enhanced authentication option is enabled in the Data Exchange Installation screen. When enabled, this will require an additional client ID and secret code generated for the Authorization ID to be entered for web services to authenticate (refer to the *Spectrum Security Manual* for details on how to configure enhanced authentication settings).

- **Auth ID** – The created Data Exchange Authorization ID that provides access to the Spectrum Database.
- **Company code** – The three-digit company code is used for authorization with RESTful services. For other services, this field is not required. If Enhanced Authentication is enabled, this field will be hidden.
- **Client ID** – If Enhanced Authentication is enabled, enter the alphanumeric system identifier generated in the Authorization ID window.
- **Client Secret** – If Enhanced authentication is enabled, enter the temporary alphanumeric code generated in the Authorization ID window.



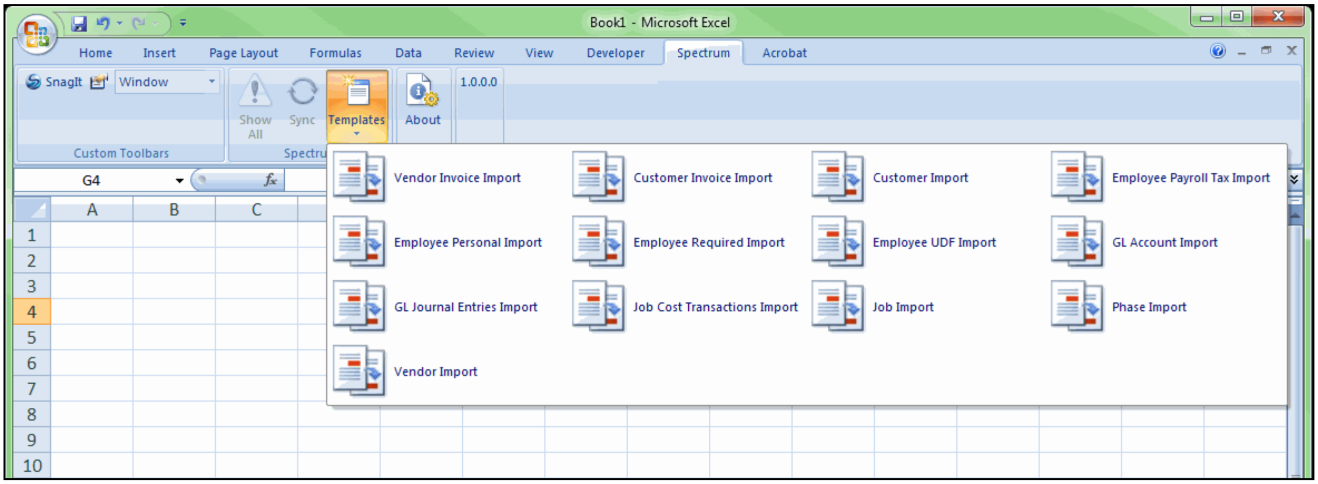
IMPORTANT: Before using enhanced authentication, you will first need to uninstall the Office Add-In.

The **About** button provides the following additional features:

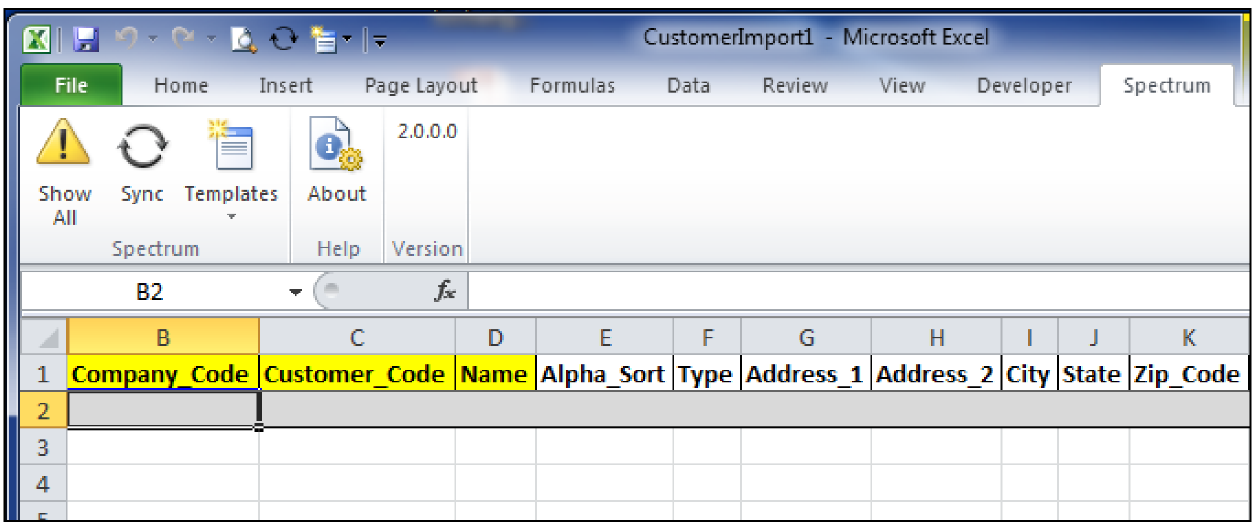
- **Version** – Displays the current version details for quick reference.
- **Test Connection button** – Click to test the connection to the company's Spectrum database using the defined Service URL and Auth ID. If the Spectrum Excel Add-in templates are not up to date then an error message will appear asking you to contact your Spectrum Administrator to update the programming.
- **Cancel and OK buttons** – Click to exit (**Cancel**) or save (**OK**) the defined Service URL and Auth Id.

Templates Button

The **Templates** button provides a list of the templates that are available for the Spectrum Office Add-in as shown below.



Once you select the template (such as Customer Import) it opens in Excel with the field names defined in row 1 of the template, as shown below.

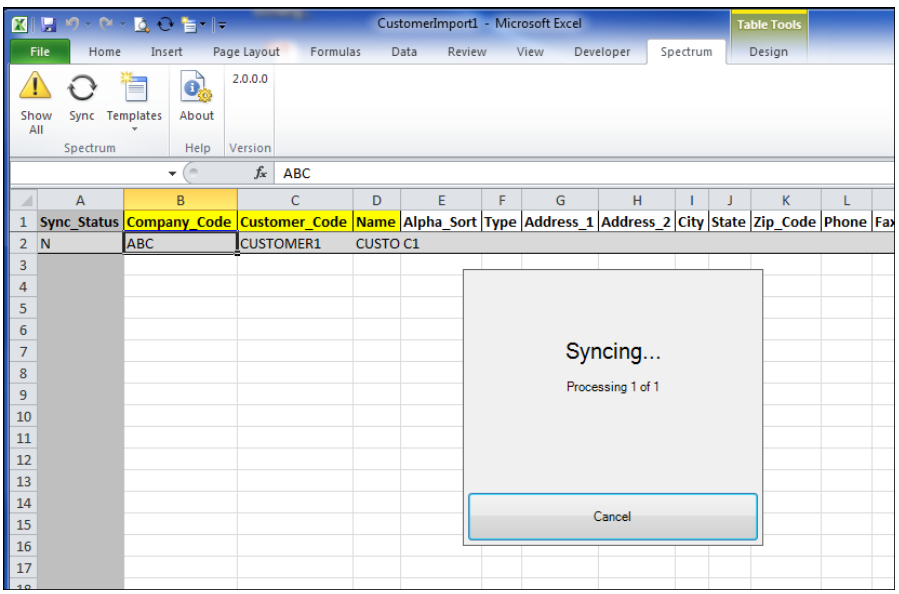


Sync Button

Once a template is selected and opened in Excel, the **Sync** button becomes available as shown above. If you enter data in a cell and then leaves the cursor active, the **Sync** button remains grayed out; you must exit the active cell to use the **Sync** button. The first time the **Sync** button is used, the template displays the Sync_Status field defined in column A, which is hidden when the template is initially opened. The Sync_Status field defines the status for each record while the programming processes the individual records as shown below.

The following Sync Statuses exist:

- **N** – Identifies a new record that has been added to the template.
- **OK** – Identifies a record that has passed all the validation logic and has been entered into the Spectrum database. Once the record is submitted, it is hidden on the template.
- **E** – Identifies a record that has an error and will not be allowed into Spectrum.
    - If an error exists, then the Sync_Status cell and the actual cell that has the error will change to red and will need to be corrected before it can be sent again using the **Sync** button.
    - An error message will display as an Excel comment on the Sync_Status cell and on the actual cell that has the error.
- **C** – Identifies a record that has been modified or a change that has already been submitted to Spectrum.
- **A** – Identifies the last record that has been aborted during the Sync process and prevented from being submitted to Spectrum. The Abort logic is tied to the defined Spectrum Web service counter overrides. Once a template receives an 'A' Sync_Status, the template is considered malformed and cannot be submitted again. You must create a new template.
- **U** – Identifies a record that has been stopped from being submitted by Spectrum. This is typically due to a hardware issue.



Stop the syncing process by clicking the **Cancel** button in the Syncing processing window.

Show All Button

The **Show All** button allows you to see the lines that are hidden during the Sync process because they have been imported into Spectrum and have a status of 'OK'.

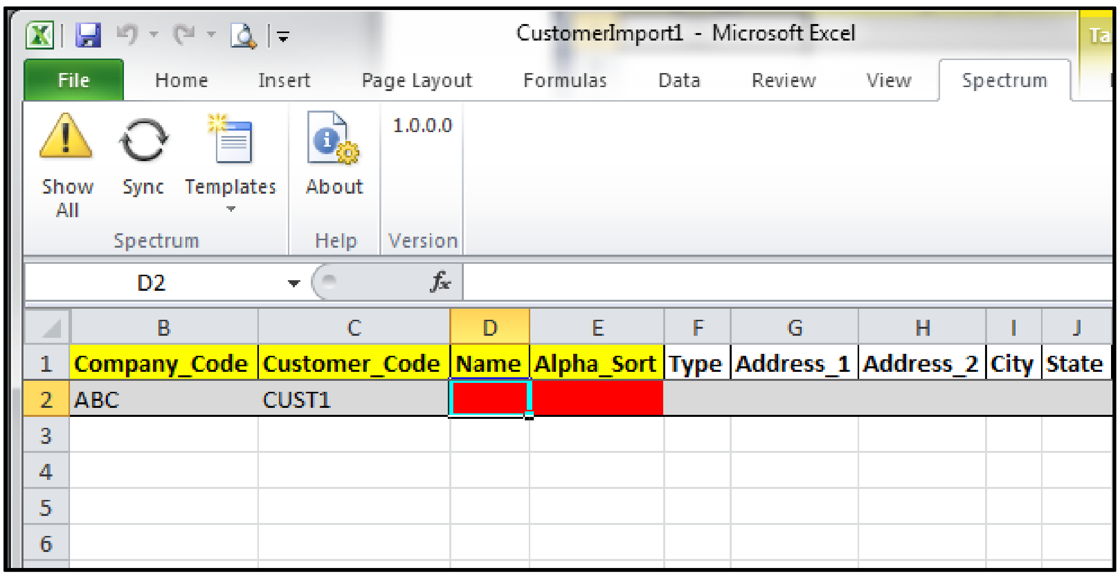
USING THE SPECTRUM OFFICE ADD-IN

To use the Spectrum Office Add-in component for the Spectrum Data Exchange module:

- Open Excel and select the Spectrum tab.
- Click the **Templates** button and select the template.

The selected template opens in Excel and the field names display in the first row as header information for each template. The header information is defined in the Spectrum Help, *Spectrum Data Exchange Manual* and should be used while creating the templates.

The yellow column headers are required fields in the layout and the light blue column headers are cost center fields. The red cells indicate that data is missing in the required fields; in this case the Sync process cannot be activated.



You can access the **Sync** button after the template has been populated. Once the Sync begins, it processes one record at a time and follows the pre-defined validation hierarchy; then it provides errors as they are triggered at each level. You can cancel the Sync if needed. If a field has an error, it will be highlighted in red along with the Sync_Status field. An error message displays using Excel comment logic. All the errors must be corrected in order to begin processing the records again.

If all the records are accepted and no errors are found, the row is sent to the Spectrum database and the record is hidden. As the Sync process continues, it shows only error records so that you can easily see the records and make the necessary corrections. Click the **Show All** button to display all records that were imported using Spectrum Data Exchange.

Each template can be customized for your own use by hiding or deleting any column header (field name) that is not required, or by rearranging the columns. Save the custom version with a new name and store it in the same location as the current template for the Spectrum Office Add-in. To select the saved custom versions, click File > Open and select the Excel custom version from where it is stored on the computer. The **Templates** button does not display any custom versions.

****NOTE: The Spectrum Office Add-in needs to be reinstalled after each Spectrum service pack or release using the current MSI installer.***

SPECTRUM OFFICE ADD-IN TEMPLATES

The following is a list of the Web Services and their associated Spectrum Office Add-in Excel template name.

Web Service name	Excel Template name
Add Vendor	Vendor Import
Change Vendor	Vendor Update Import
Change Vendor - UDF	Vendor UDF Import
Change Vendor Locations	Vendor Locations Import
Vendor Notes	Vendor Notes Import
Add or Change AP Use Tax	Vendor Use Tax Import
Add or Change Subcontract	Subcontract Import
Add or Change Subcontract Phases	Subcontract Phase Import
Change Subcontract - UDF	Subcontract UDF Import
Subcontract Notes	Subcontract Notes Import
Add Vendor Invoices	Vendor Invoice Import
Add Customer	Customer Import
Customer Bill-to	Customer Bill To Import
Customer Ship-to	Customer Ship To Import
Change Customer - UDF	Customer UDF Import
Customer Notes	Customer Notes Import
Add or Change AR Sales Tax	Customer Sales Tax Import
Add Customer Invoices	Customer Invoice Import
Add Cash Receipts	Cash Receipts Import
Add or Change AR Change Request	Change Request Import
Add or Change AR Change Order	Change Order Import
Change Request or Change Order Notes	Change Request-Order Notes Import
Add or Change AR Pre-Billing Quantity	PreBilling Quantity Import
Add Equipment (Required Fields)	Equipment Required Import
Change Equipment Charges	Equipment Charges Import
Add Equipment Warranty	Equipment Warranty Import
Change Equipment UDF	Equipment UDF Import
Equipment Notes	Equipment Notes Import
Add Equipment Costs	Equipment Cost Transactions Import
Add Equipment Revenue	Equipment Revenue Transactions Import
Add Equip Meter Reading	Equipment Meter Import

Web Service name	Excel Template name
Add ET Requisitions	Equipment Tracking Req Import
Add GL Account	GL Account Import
Change GL Account - UDF	GL Account UDF Import
Add GL Journal Entries	GL Journal Entries Import
Add Inventory Items	Inventory Required Import
Change Inventory Items Sell Prices	Inventory SellPrice Import
Change Inventory Items - UDF	Inventory Item UDF Import
Inventory Item Notes	Inventory Item Notes Import
Add Inventory Items Receipts	Inventory Receipts Import
Add Inventory Job Requisitions	Job Requisition Import
Add Inventory Cost Adjustment	Inventory Cost Adjustment Import
Add Job	Job Import
Update Job	Job Update Import
Change Job - UDF	Job UDF Import
Add or Change Job Phase	Phase Import
Change Job Phase - UDF	Phase UDF Import
Job Notes	Job Notes Import
Phase Notes	Phase Notes Import
Add Job Cost Transactions	Job Cost Transactions Import
Job Cost Projections	Job Cost Projections Import
Add Employee (Required Fields)	Employee Required Import
Change Employee - Required	Employee Required Update Import
Change Employee - Personal Info	Employee Personal Import
Change Employee - Payroll/Tax	Employee Payroll Tax Import
Change Employee - UDF	Employee UDF Import
Add or Change Employee Deduction/Add-ons	Employee Deduction/Addons Import
Employee Notes	Employee Notes Import
Add Change Employee Entity	Employee Entity Import
Add Change Employee Entity Ded/Add-on Code	Employee Entity Deduction/Addons Import
Add Change Employee Entity Time Bank	Employee Entity Time Banks Import
Pre-Time Card	PreTimecard Import
Equipment WO Properties	Equipment WO Properties Import
Equipment WO Component	Equipment WO Component Import
Equipment WO Notes	Equipment WO Notes Import
Project Log	Project Log Import
Project Log Notes	Project Log Notes Import
Add Change Job Spec Section	Project Job Spec Import
Add Project Log Recipient	Project Log Recipient Import
Add or Change Service Contract	Service Contract Import
Change Service Contract UDF	Service Contract UDF Import
Service Contract Notes	Service Contract Notes Import
Add Work Order Site Address	WO Site Address Import
Add Work Order Site Equipment	WO Site Equipment Import
Change Work Order Site - UDF	WO Site UDF Import

Web Service name	Excel Template name
WO Site Notes	WO Site Notes Import
Add or Change Work Order Header	WO Header Import
Change Work Order Header - UDF	WO Header UDF Import
WO Header Notes	WO Header Notes Import
Add Work Order Labor Cost	WO Labor Cost Import
Add Work Order Material Cost	WO Material Cost Import
Add Work Order Other Charges	WO Other Charges Import