Lightning Data Viewer App

Manual

1 — Last update: 2015/04/13

Lightning Tools

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Introduction

The Lightning Tools' Data Viewer App provides your Office 365™ users with the ability to see SharePoint®
list content or external content data stored outside of SharePoint® within an easy to configure App Part.
Users can add the App, and then within seconds configure a connection to data with the ability to select the
columns that they wish to see, apply data formatting, conditional formatting, grouping, filtering, sorting and
to build calculated columns.

Using the Lightning Tools' Data Viewer App for Office 365™, users can easily configure views using the
Display tab. Columns can be re-ordered, column Aliases set (FName = Firstname as an example), columns
widths configured, along with sorting and grouping. Formatting options are then configured simply by setting
properties such as Bold, Italic and Underline. Conditional Formatting can also be set individually on each
column. Conditional formatting allows users to highlight important data such as Tasks that are due today or
past due, Tasks assigned to you, Documents checked out to you, or products with a low stock level.
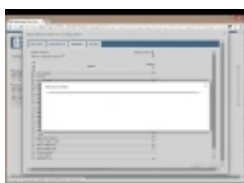
You can easily select columns from your data source to include within your view. With other products, columns need to be added by writing code such as XSLT or HTML. With the Lightning Data Viewer App, you simply select the column, re-order by dragging the column name up and down, and then also set filters using the filter icon on the right of the column. Filters can also span multiple columns, for example, Tasks Due Today AND Assigned to Brett Lonsdale.

To use the Data Viewer app within your Office 365™ tenancy complete the following steps:

1. Install the Data Viewer app from the SharePoint Store, which installs a 14-day trial license.
2. Add the app to a site.
3. Add the Data Viewer App Part to a page.
4. Configure the Data Viewer App Part.

If you want to continue using the Data Viewer app, purchase a Data Viewer app license from Lightning Tools and activate the license.

Installation of the App >>

Installation of the App

This section details how to install the [Data Viewer App](#) from [Lightning Tools](#), so it can be used on [Office 365™](#) sites to display aggregated SharePoint® content. By completing the steps on this page, the *Data Viewer* app appear on the *Your Apps* page, under *Apps you can add*, for all sites within an [Office 365™](#) tenant.

You install the app by getting the app from the SharePoint Store where it is provided as a free **Unlimited user** 14 day trial. You can then use the Data Viewer app by [adding](#) the app to a site, adding the Data Viewer App Part to a page, and then [configuring the Data Viewer App Part](#). You can purchase a Data Viewer app license from [Lightning Tools](#) and then [activating the license](#).

> To use the following method to install the Data Viewer app to an Office 365 tenant, you must be an [Office 365 global admin](#). If you have not previously added the Data Viewer app to your Office 365 tenant, then you could also add it from the SharePoint Store at a site level.
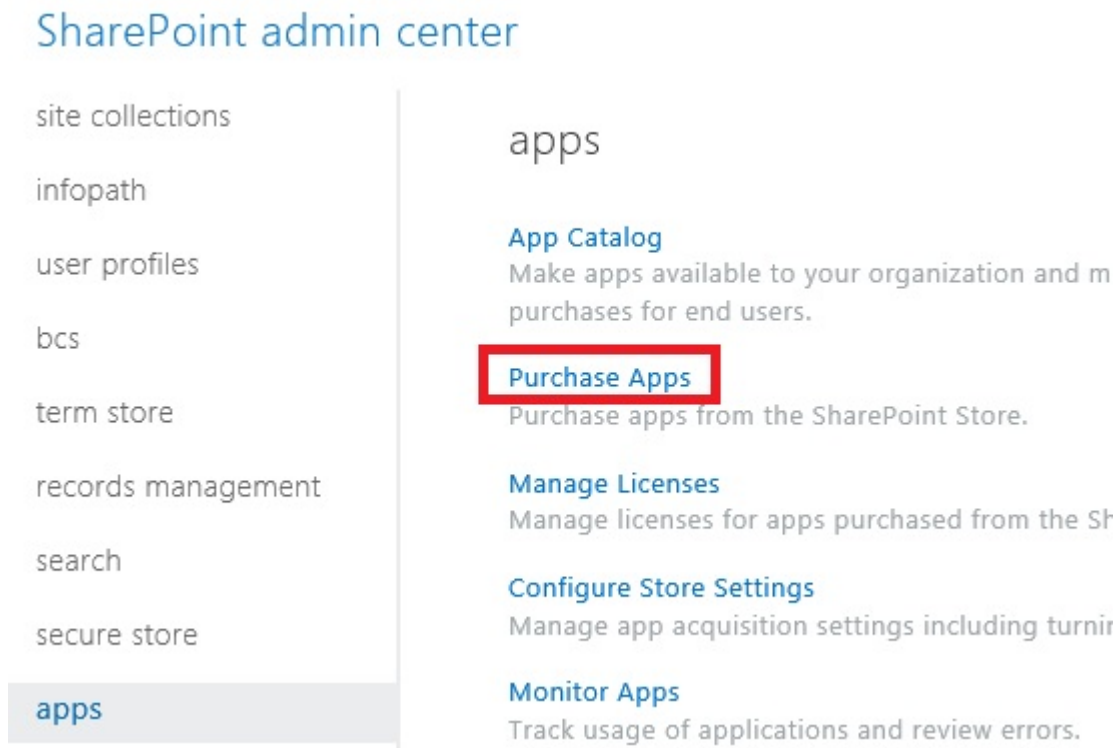
Use the following steps to install the Data Viewer app from the SharePoint Store:

1. Navigate to your [SharePoint admin center](#).

    Note: If you are unsure where your [SharePoint admin center](#) site is:
   1. Click the [Apps Launcher](#) icon in the top left and then click **Admin** to display the [Office 365 admin center](#).
    2. At the bottom of the Quick Launch, expand **Admin** and then click **SharePoint** to display the *SharePoint admin center*.

2. On the Quick Launch click **apps**, and then click **Purchase Apps**.

SharePoint admin center

site collections

infopath

user profiles

bcs

term store

records management

search

secure store

apps

apps

App Catalog
Make apps available to your organization and m
purchases for end users.

Purchase Apps
Purchase apps from the SharePoint Store.

Manage Licenses
Manage licenses for apps purchased from the Sh

Configure Store Settings
Manage app acquisition settings including turnir

Monitor Apps
Track usage of applications and review errors.

The SharePoint Store is displayed.

3. In **Find an app** search box, type **Data Viewer** and press **ENTER**.

SharePoint Sto

Price

All

Free

Categories

All

Business

Clocks & Calendars

Most Relevant
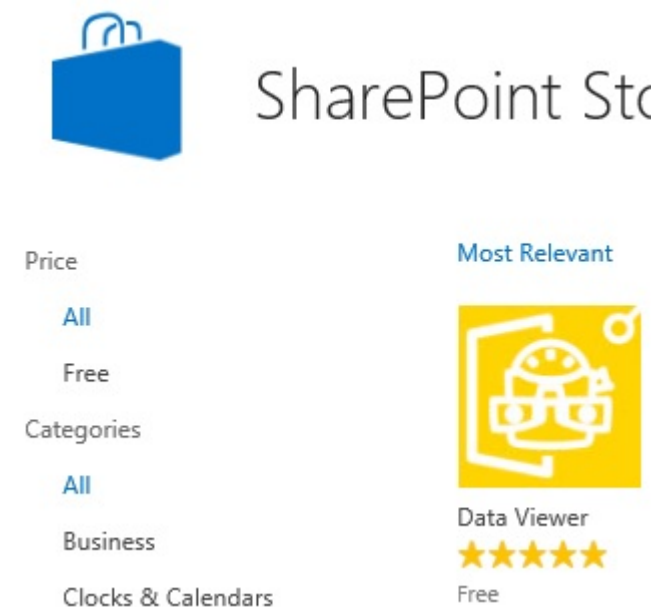
Data Viewer
★★★★★
Free

4. Click **Data Viewer**.

5. Click **Add It** to display, *you just got this app for everyone in your organization*.

LT ▸ Add Apps ▸   ?

You just got this app for everyone in your organization.
Data Viewer

☑ Add this app to LT

You can add this app later on any site you can manage, or return to the SharePoint Store to get more apps.

Return to site

6. Click **Return to site**.
   The Data Viewer app is now available for users to add to their Office 365™ site, and then subsequently can be added to a page within that site.

The app will appear under the **Manage Licenses** on the *SharePoint admin center*, which displays information of the **free, Unlimited users** SharePoint Store license. You can monitor the *Data Viewer* app on the Monitor Apps page.

Adding the App to a Site >>

Related Office.com documentation

- Tenancies and deployment scopes for apps for SharePoint →
- Configure settings for the SharePoint Store →
- Monitor apps for your SharePoint Online environment →
- Plan customizations, solutions, and apps for SharePoint Online →
- Assigning Office 365 admin roles

Adding the App to a Site

To use the Data Viewer App Part on a SharePoint® page, you first need to add the Data Viewer app to the site, where the page exists. There are many ways of adding an app to a site. The steps in this section, assume that the *Data Viewer* app appears under *From Your Organization* in the *App Catalog*. To add the *Data Viewer* app to the *App Catalog*, use the steps documented in the Installation of the App Package section of this online manual.

To add the Data Viewer app to a site, use the following steps. :
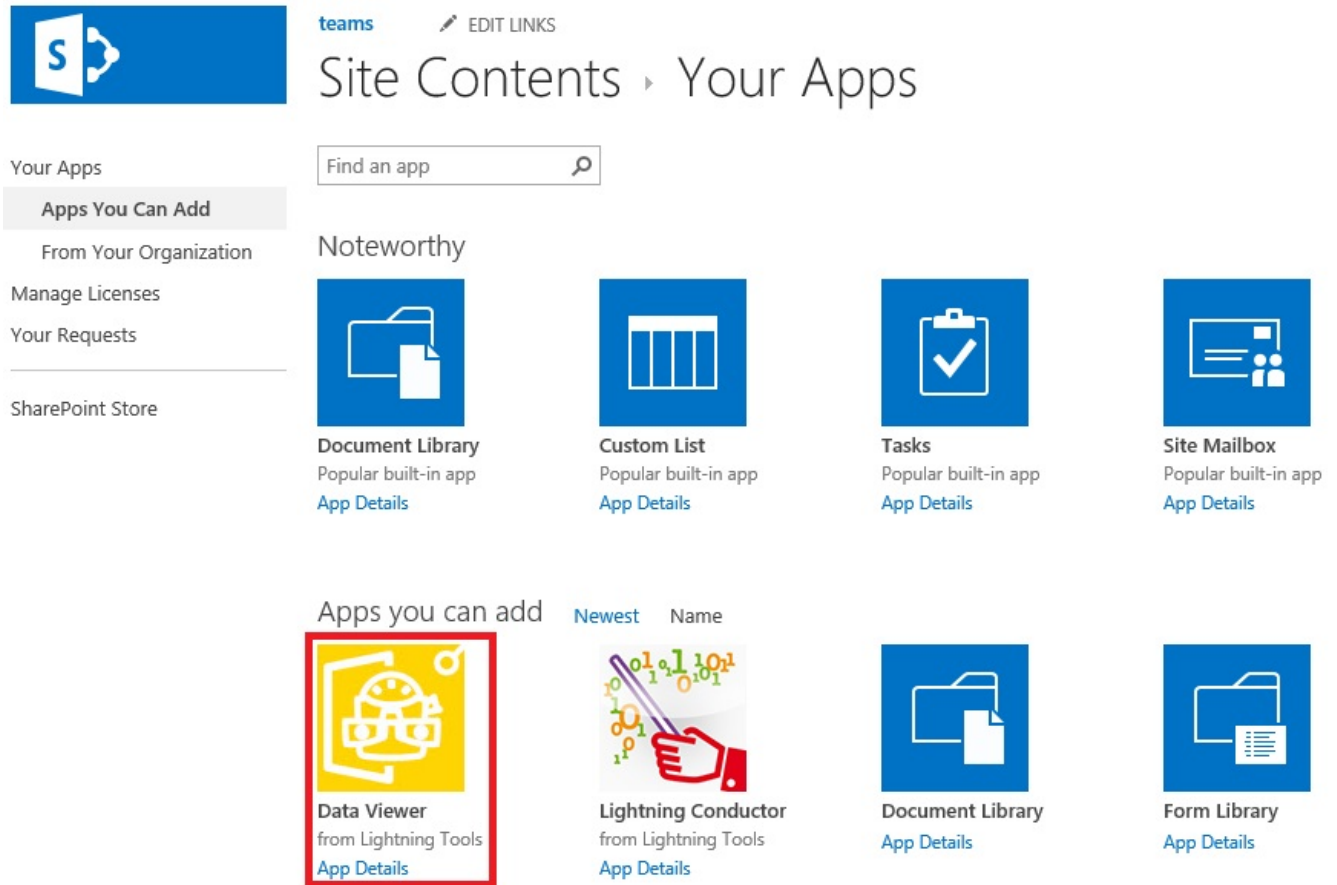
> You need to be mapped to the Full Control permission level to complete the following steps. If you are a Site Owner, then you will be mapped to this permission level.

1. Navigate to the site where you wish to use the Data Viewer App.

2. Click **Settings** ⚙ in the top right corner of the team site, and then click **Add an app**.
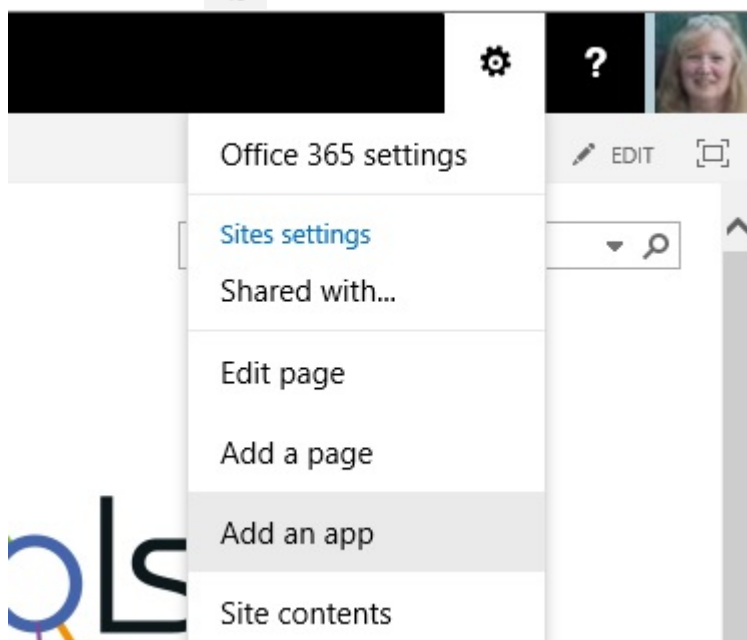
3. On the **Your Apps** page, under **Apps you can add**, click **Data Viewer**.

    Tip: In your organization you may find the *Data Viewer* app below **Noteworthy**. If your organization has many apps, to quickly find the app, type **Lightning** in the **Find an app** search box.

4. On the **Do you trust Data Viewer** dialog, click **Trust It**.

   The *Site Contents* page is displayed, and the app will begin to install. It will first appear grayed during the installation, and then when the installation is complete you will see the app as displayed below.

   You can now start to use the app, by <u>adding the Data Viewer App Part to a page</u>, and <u>configuring the App Part</u>, as described in the in the <u>Configuring the Data Viewer</u> section of this online manual.

Related Office.com documentation

- <u>Add an app to a site →</u>
- <u>Monitor apps for a site →</u>

- [Remove an app from a site →](#)
- [Permissions in Office 365 →](#)
- [Introduction: Control user access with permissions →](#)
- [Understanding permission levels →](#)

Displaying an App on a page.

You can display the Data Viewer app from Lightning Tools on a SharePoint® page using the Data Viewer App Part control.

1. In the browser, navigate to the page where you want to add *Data Viewer* App Part.
2. Click **Settings** ⚙ , and then click **Edit page**.
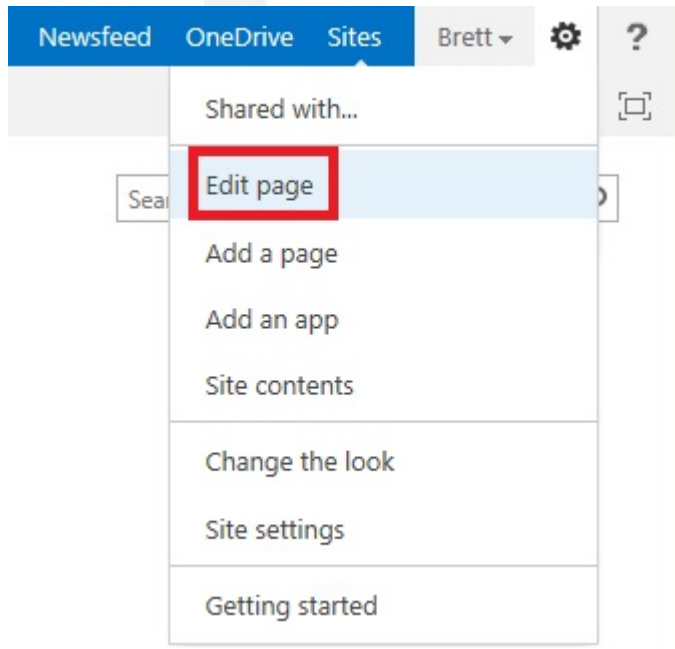
3. If you are using a *Web Part* page, click **Add a Web Part** in the Web Part zone you wish to add the Data Viewer App Part
4. On either a *wiki* page, or a *Web Part* page, click the **Insert** ribbon, and then click **App Part** in the **Parts** group.

5. In the **Parts** pane, click **Data Viewer** and click **Add**.
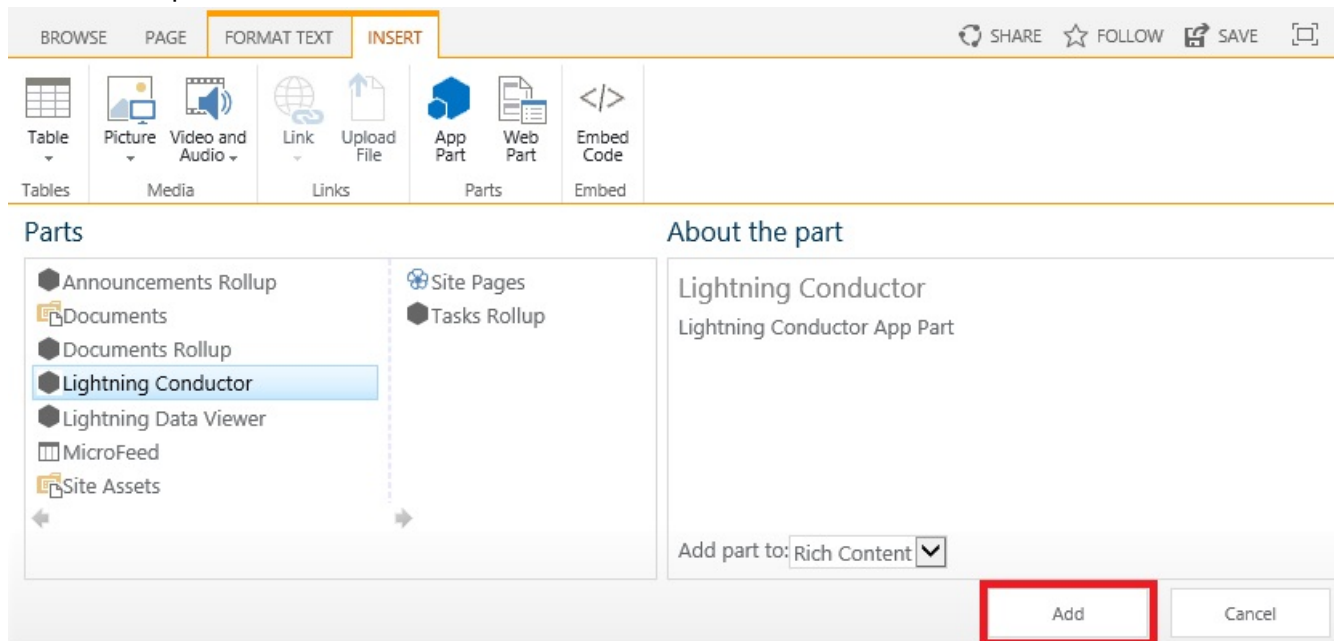
6. Configure the app.

> **Troubleshooting**: If the **Data Viewer** App Part does not appear in the **Parts** pane, the Data Viewer app has not been added to the site. Contact your site owner to add the app to your site.

When the app is purchased from the SharePoint Store you will have installed the free (trial) version of the app, which is valid for 14 day upon which the app will need to be licensed. The number of days remaining in your trial will be shown within the app part.

When the 14 day trail period has expired, the app part will display that it is unlicensed and will no longer function until you licensed it. Contact your Office 365 administrator to purchase and activate the license.

<< Adding the App to a Site
Licensing the App >>

Related Office.com documentation

- Add an App Part to a page →
- Move, Minimize, or delete a Web Part from a page →

- [Keyboard shortcuts for Web Part Pages →](#)
- [Troubleshooting using the Web Part Maintenance Page →](#)

Licensing the App

The Data Viewer app for Office 365™, is available from the SharePoint Store as a free **Unlimited users** 14 day trial. You can use the full functionality of the app for 14 days upon which the app will need to be licensed. The number of days remaining in your trial will be shown within the app part when you have added it to the page.

When the 14 day trail period has expired, the app part displays that the trial period has been expired, and will no longer function until a licence is activated.
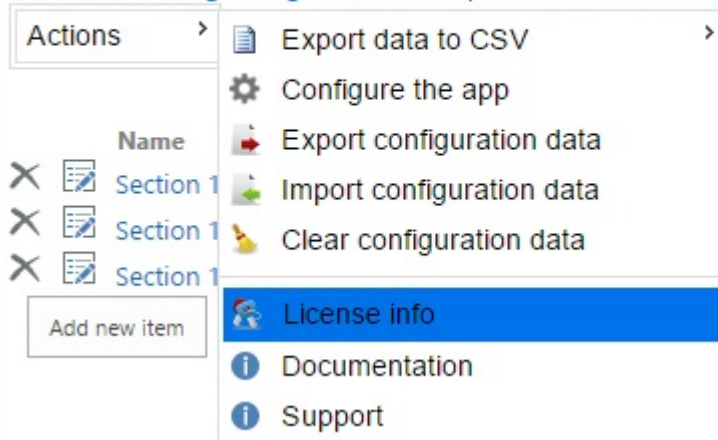
The Data Viewer app license is managed separately from the free **Unlimited users** SharePoint Store license. You need to purchase a Data Viewer app license from Lightning Tools. Once you have purchased the Data Viewer app and have received the license key, you need to enter the key and activate the app using the **Licensing of Product 'Data Viewer App'** dialog, which can be displayed by either:

- Click the **n days left** or **Activate** hyperlink.
  or
- From the **Actions** menu clicking **License information**.

The **Licensing of Data Viewer App** dialog is displayed.

Licensing of Lightning Data Viewer App   ✕

⊗ License trial period is expired

License key
Specify activation license key

Email
Specify owner email address

Organization
Specify owner organization

User Name
Specify owner name

Activate   Cancel

- In the **License Key** text box, paste or type the licence key provided by Lightning Tool.
- In the **Email** text box, type your company's main contact for Data Viewer App.
- In the **Organization** text box, type the name of your company.
- In the **User Name** text box, type the first and last name of your company's main contact.

Then click **Activate**.

<< Displaying an App on a page.
How to tell the version of the app >>

How to tell the version of the app

To tell the version of the Data Viewer app complete the following:

1. Navigate to a site where you have added the Data Viewer app.
2. Either on the Quick Launch click **Site Contents** or from the **Setting** ⚙ menu, click **Site Contents**.
3. Point to the tile for the Data Viewer app, and click the ellipse (**…**) next to the app name.
   A callout displays which contains version information.
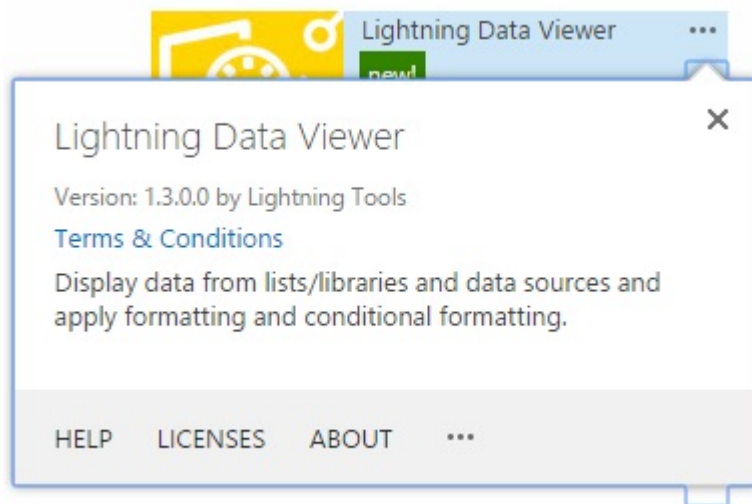
The Data Viewer callout provides the following links.

- **Help**. Use to display this online documentation.
- **Licenses**. Use to display the **App Licence Management** page.
  Note: When you purchase the Data Viewer app from the SharePoint Store you add the **Unlimited Free** 14 day trial version of the app. To use the app once the trial version expires then a Data Viewer license need to be purchase from Lightning Tools. the Data Viewer license is managed separately from the free **Unlimited users** SharePoint Store license. The **App License Management** page only displays the details of the SharePoint Store license and not information of the Data Viewer license you have purchased from Lightning Tools. See the Licensing the App section, for more information on licensing Data Viewer.
- **About**. Use to display the Data Viewer page on the SharePoint Store.
- Ellipse (**…**). Use to display the links:
  - **Details**. Use to display the **App Details** page, which allows a site owner to monitor information about the app, for example you can view information about how often the app has been

launched and how many errors the app has had. For more information of this option, see the Microsoft Office support page, Monitor apps for a Site.

- ◦ **Permissions**. Use to display the permissions of the Data Viewer app.
- ◦ **Remove**. Use this link if you no longer need the Data Viewer app on your site.
  Note: To remove an app, you must have Full Control permissions for the SharePoint site. If you are a Site Owner, you are mapped to this permission level.

<< Licensing the App
Updating the app >>

Updating the app

Within 24 hours after an updated version of the Data Viewer app is accepted at the SharePoint Store, a notification that an update is available appears next to the app on **Site Contents** page of every website where it is installed. There is nothing in the SharePoint Online infrastructure that forces you to update. Updating a SharePoint app is optional. Lightning Tools updates their SharePoint apps to provide fixes to issues and new functionality. If you would like to know the new features an update provides, then submit a support ticket. Please provide the product name: **Data Viewer app** and the version number of the app currently installed in your Office 365™ tenant.

This page details how to check if an update is available, and how to install an update.

How to check if an update is available, complete the following steps:

1. Navigate to any site where the Data Viewer app has been added.
2. Either, on the Quick Launch, click **Site Content** or from the **Settings** menu, click **Site Content**.
   If your Data Viewer app needs an update, a link to the update appears under the name.

To install an update, complete the following steps:

1. Navigate to any site where the Data Viewer app has been added.
2. Either, on the Quick Launch, click **Site Content** or from the **Settings** menu, click **Site Content**.
3. To the right of the Data Viewer app tile, click **update**.

The Data Viewer dialog from the SharePoint Store is displayed.

4. Click **Get It**.

    A **Working on it** dialog is displayed, and then a **Do you trust Data Viewer** dialog is displayed.

5. Click **Trust It**.

    The *Site Contents* page is displayed, where the title for the Data Viewer app is greyed and states that the update is downloading, then updating.

[<< How to tell the version of the app](#)
[Configuring the Data Viewer >>](#)

Configuring the Data Viewer

The Lightning Tools' Data Viewer App provides your Office 365™ users with the ability to see SharePoint® list content or external content data stored outside of SharePoint® within an easy to configure App Part. This page contains documentation on:

- Configuring an App Part.
- Using the Data Viewer Web Part Configuration dialog.
- Exporting and Importing the configuration data for the App Part.

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Configuring an App Part

Complete the following steps to configure the Data Viewer App Part:

1. Add the Data Viewer App Part to the page.
   Note: You need to add the Data View app to your site, before you can add the Data Viewer App Part to the page.
2. On the *Lightning Data Viewer App Part*, click **Actions**, and then **Configure the app**.

   The **Data Viewer App Configuration** dialog is displayed.
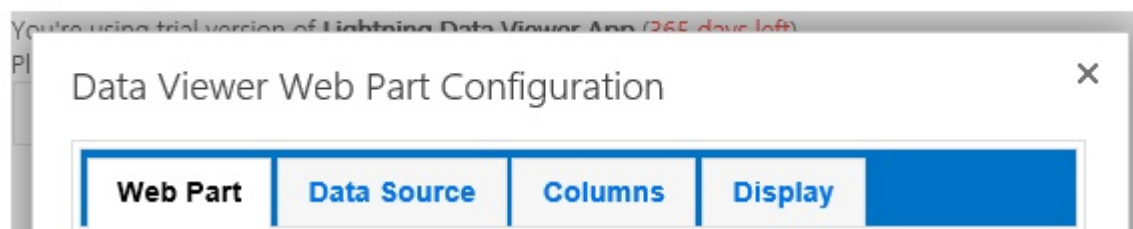
← Go to top of section

Using the Data Viewer App Configuration dialog

The dialog consists of four tabs:

1. Web Part. Use to select the data source provider, and the type of view that you wish to create.
2. Data Source. Use to configure the data source such as selecting a list, or configuring the methods required by Business Connectivity Services (BCS).
3. Columns. Use to build your view by selecting the columns that you wish to display, and also configure the filters for each column along with option of adding custom calculated columns.
4. Display. Use to style your view by setting conditional formatting, column widths, data formatting and configuring the pagination and CRUD operations.

Once you have configured the options on the four tabs, at the bottom of the **Data Viewer App Configuration** dialog, click **Save**.

← Go to top of section

Exporting and Importing App Part configuration data

Importing and Exporting of configuration data allows you to export the settings and import them again between different environments. such as, from your staging environment to your production environment.

To export the configuration of an App Part:

1. Add an App Part to the page, and then configure the Data Viewer app part.
2. From the **Actions** menu click **Export configuration data**.

   The browser may then ask you to allow pop-up.
3. Save the Data Viewer Configuration data file, amending the name of the file to represent how you configured to App Part.

To import the configuration of an App Part:

1. Add an App Part to the page.
2. From the **Actions** menu click **Import configuration data** to display the **Import Configuration Data** dialog.
3. Click **Browse** to display the **Choose File to Upload** dialog box.
4. Navigate to where you save the configuration data file, and then click **Open**.
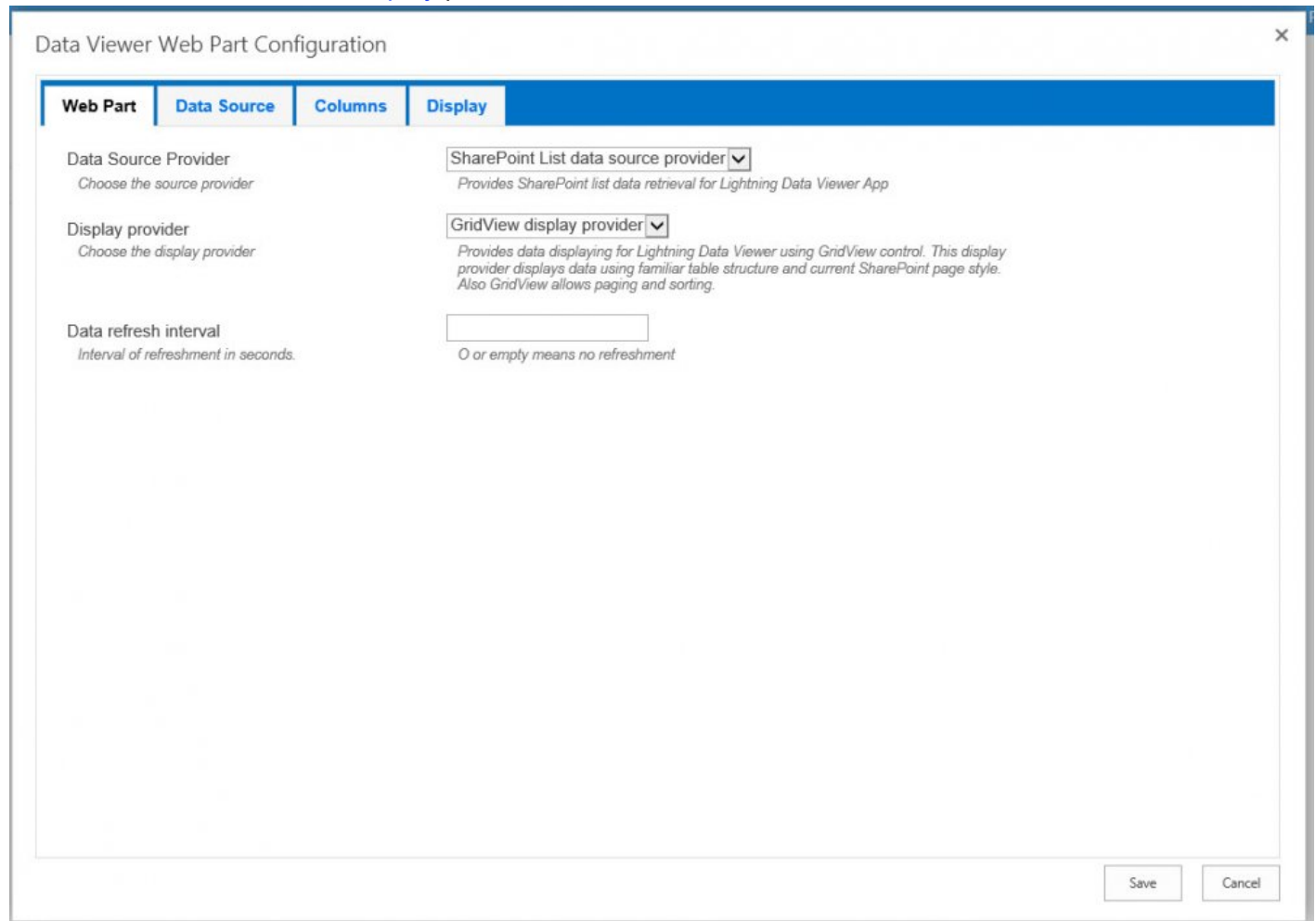5. Click **Save**.

← Go to top of section

<< Updating the app

The Web Part Tab >>

The Web Part Tab

The **Web Part** tab is the first tab on the **Data Viewer Web Part Configuration** dialog and allows you to choose the data source and display providers, and the data refresh interval, as described below:

Data Source Provider

The **Data Source Provider** list allows you to select either the **SharePoint List data source provider** or the **SharePoint external data source provider** (Business Connectivity Services – BCS). In the future versions you will find ODATA.

Only app-scoped external content types can be used with the Data Viewer App Part. App-scoped external content types are not loaded into the BCS metadata store using the SharePoint admin center. You can either publish an app-scoped external content type using Visual Studio or create an app-scoped external content type in a SharePoint app, which can then be added to a site. See Lightning Tools blog posts:
* Business Connectivity Services in SharePoint 2013 – App-scoped external content types.
* Creating an app-scoped External Content Type based on OData sources.

Display Provider

There are three display providers that allow different approaches to displaying your content:

- **GridView display provider**. This is the default display provider, which is often referred to as the no-code or grid like display provider. Use this provider to select columns to display, configure filters, sorting, pagination, column width and formatting without the need to write any code.
- XSL display provider. Use this provider to write your own XSLT code, for example to include your own branding. We provide XSLT code for views such as a Calendar view
- JSON display provider. Build your own view using jQuery/JavaScript.

Data Refresh Interval

The **Data Refresh Interval** controls how often the Data Viewer will update without refreshing the web page. If the option is set to 0, you will need to refresh the page in order to see new data. If there is a value other than 0 such as 5, every 5 seconds the data will be refreshed without a page post back.

Using an XSLT view

The XSLT display provider allows you to configure the Data Viewer to display content using XSLT (Extensible Stylesheet Language Transformations). Use this option if you have or you know someone with XSLT knowledge. The GridView Display Provider is most suited to users who have no coding experience.

To use an XSLT view complete the following steps:

1. On the Web Part tab in the **Display Provider** section select **XSLT display provider**.
2. Select your data sources to display in the app part using the Data Source tab.
3. On the Columns tab select the column, sorting and filtering configurations you require.
4. On the Display tab, you can upload your own XSLT or select a pre-existing XSLT file such as **LightningTools Calendar**.

Configuring the Data Viewer App Part →

Pre-defined XSLT Files

Five XSLT files are provided with the Data Viewer App for Office 365, that you can use or customize. Two are sample XSLT files and are not intended for production use. The other three could be used and are detailed below:

- **Calendar**: Use to display list items from a list that contains start and end dates, such as, a Calendar (Event) list or a Task list. On the Columns tab, select the **Title**, start date/time and end date/time* columns. On a task list, when the **Priority** and **Status** columns are selected, content from those columns are displayed as a screen tip.

- **Announcements**: This XSL file shows how to brand list items using formatting and colour options. On the Columns tab, select the **Title**, **Body** and **Expires** columns. If you select only one of these

columns, content from the other columns will not display within the app part.

- **Posts**: Use to display Discussion Board items within a discussion view.
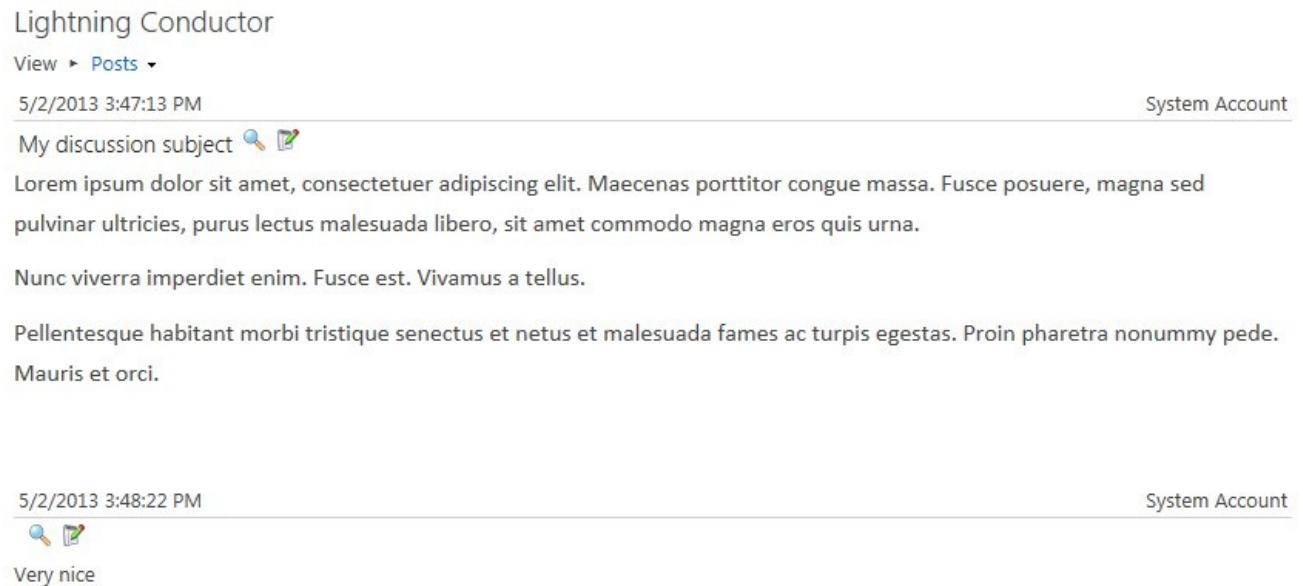
[Using an XSLT view →](#)
[Uploading custom XSLT views →](#)

Uploading Custom XSLT views

To create and upload you own custom XSLT view for the Data Viewer App use the following steps:

1. Select the Web Part tab on the Data Viewer App Configuration dialog.
2. In the **Display Provider** section, select **XSL display provider**.
3. On the Data Source tab, navigate to a site and select a list or library.
4. On the Columns tab, select the columns that the XSL will use.
5. Select the Display tab,

   - In the **XSL Styles** section, select one of the predefined styles.
   - Click the code icon to view the XSLT source.

3. Copy the source into Visual Studio or Notepad if you want to modify them, and save your XSLT to a file with either a .xsl or .xslt extension.
4. On the Display tab on the Data Viewer App Configuration dialog:
   - Click **Browse** to display the **Choose File to Upload** dialog box.
   - Navigate to your amended XSL file and click **Open**.
   - Click the upload icon to save your new style sheet file to the **Style Library** at the top level site of the site collection.
   - In the **Choose XSL Style** list, select the file you have just uploaded.
     Tip: To view a preview of the content rendered using the XSL file, click the magnify icon .
5. Configure any column, sorting or filtering requirements, and then click **Save**.

[Using an XSLT view →](#)

Using the JSON Display Provider

The Data Viewer App for Office 365, provides several different ways of displaying the content from lists and libraries. You can select one of the display providers on the Web Part tab on **Data Viewer Configuration** dialog:

- GridView display provider
- XSL display provider
- **JSON display provider**.

The JSON display provider allows you to configure the Data Viewer App Part to display the content using client-side code. Use this option if you have a developer with knowledge of SharePoint, JavaScript and most likely JQuery. The GridView display provider is most suited to users who have no coding experience.

This page describes how to configure the Data Viewer to use the JSON display provider, and the JavaScript you need to include.

Procedure

1. Open the Data Viewer App Configuration dialog.
2. On the Web Part tab, in the **Display Provider** section, select **JSON display provider**.
3. Use the Data Source and Column tabs to select the content you wish to display.
4. On the Display tab, in the **JavaScript** section, from the **Choose JavaScript file** list select a JavaScript file to render the list/library content. The list is populated with two pre-existing JavaScript file and any JavaScript files you have uploaded.

    Note:To upload JavaScript files use the **Browse** button to display the **Choose File to Upload** dialog box. Select your JavaScript file and then click **Open**. On the Data Viewer App Configuration dialog click the upload icon.

    Lightning Tools provide two pre-existing files:
    - LightningTools Data table.
    - LightningTools Grouped List.

    Tip: You can view the code contained in these JavaScript files by clicking the code icon, and you can display a preview by clicking the magnify icon.

3. At the bottom of the **Data Viewer App Configuration** dialog, click **Save**.

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Data Source Tab

The **Data Source** tab is the second tab on the **Data Viewer App Configuration** dialog. The sections and the controls in the sections will vary depending on the Data Source provider selected on the Web Part tab:

- SharePoint List data source provider
- **SharePoint external data source provider**

SharePoint List data source provider configuration

When the **SharePoint List data source provider** is selected on the Web Part tab, then the **Data Source** tab consists of two sections:

- A tree view that displays SharePoint lists and libraries within the site collection. The tree view is security trimmed and only displays sites, lists and libraries you can access. You can expand the nodes within the tree view and then select the list that you wish to display. The columns from this list will then be displayed on the Columns.
- Use the **Limit the number of rows** text box to limit the of data displayed in the App Part.
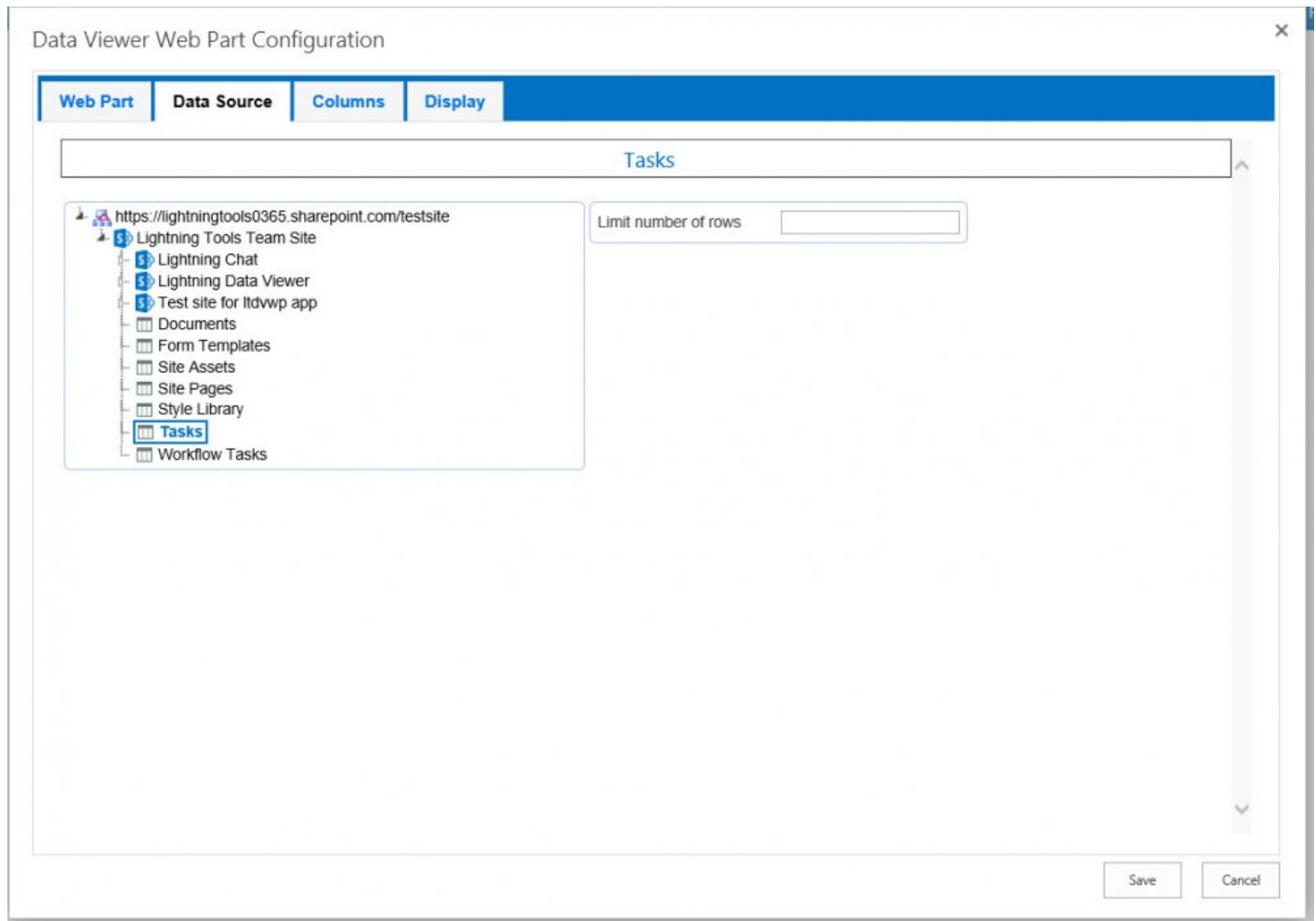
External data source provider configuration

When the **SharePoint external data source provider** is selected on the Web Part tab, then the **Data Source** tab consists of:

- A tree view. Use the tree view to select a site where you have added the app-scoped external content type.
- **Load entities** button. Click this button to populate the **Entity details** list with all app-scoped external content types from the site selected in the tree view.
- **Entity details** list. Select the app-scoped external content type configured to access the external data to be displayed by the Data Viewer App Part.
- Entity methods section that contains four lists that can be used to select:
  - Entity filter method
  - Entity creator method
  - Entity updater method

◦ Entity delete method

[<< Using the JSON Display Provider](#)

[Columns Tab >>](#)

Columns Tab

Using the **Columns** tab, you can select the columns that you wish to display within the Data Viewer App Part. by selecting the check box to the left of the column name. The following screen shot shows the **Columns** tab, when the **SharePoint List data source provider** is selected on the Web Part tab and a Tasks list is selected on the **Data Source** tab.
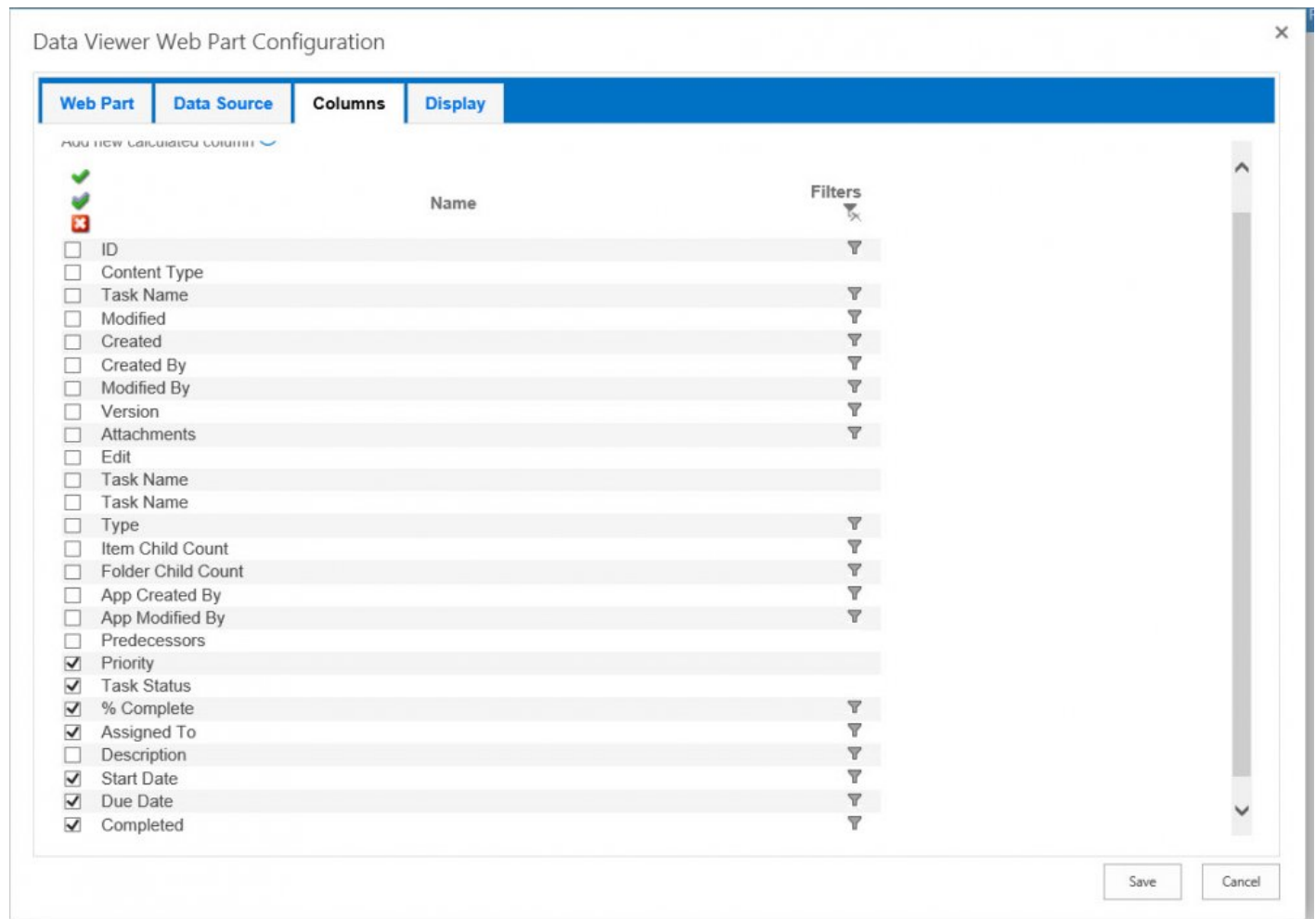
At the top of the tab are:

- Update the Data Viewer app part with the columns selected. ♻
- Add calculated column ⊕
- Configure Advanced filters. ▽

Below these controls you can configure:

- Above the left checkboxes, there are three icons, which allow you to select all columns ✔ , invert the selection ✔ , and uncheck all columns ❌ .
- Once you have selected the columns to be displayed, you can set the order that the columns will appear in the App Part, from left to right within your view, by dragging the column name up or down until the columns are in the correct order.
- **Filtering**. You can filter the number of items return based on values in one column, by using the **Filtering** icon ▼ , or more columns by clicking the **Advanced filtering** link in the top right of the **Columns** tab. Click the **Remove All Filters** icon ▼ , to remove all persistent filters from all columns. More information on filtering can be found in the Column Filtering section later in this documentation.
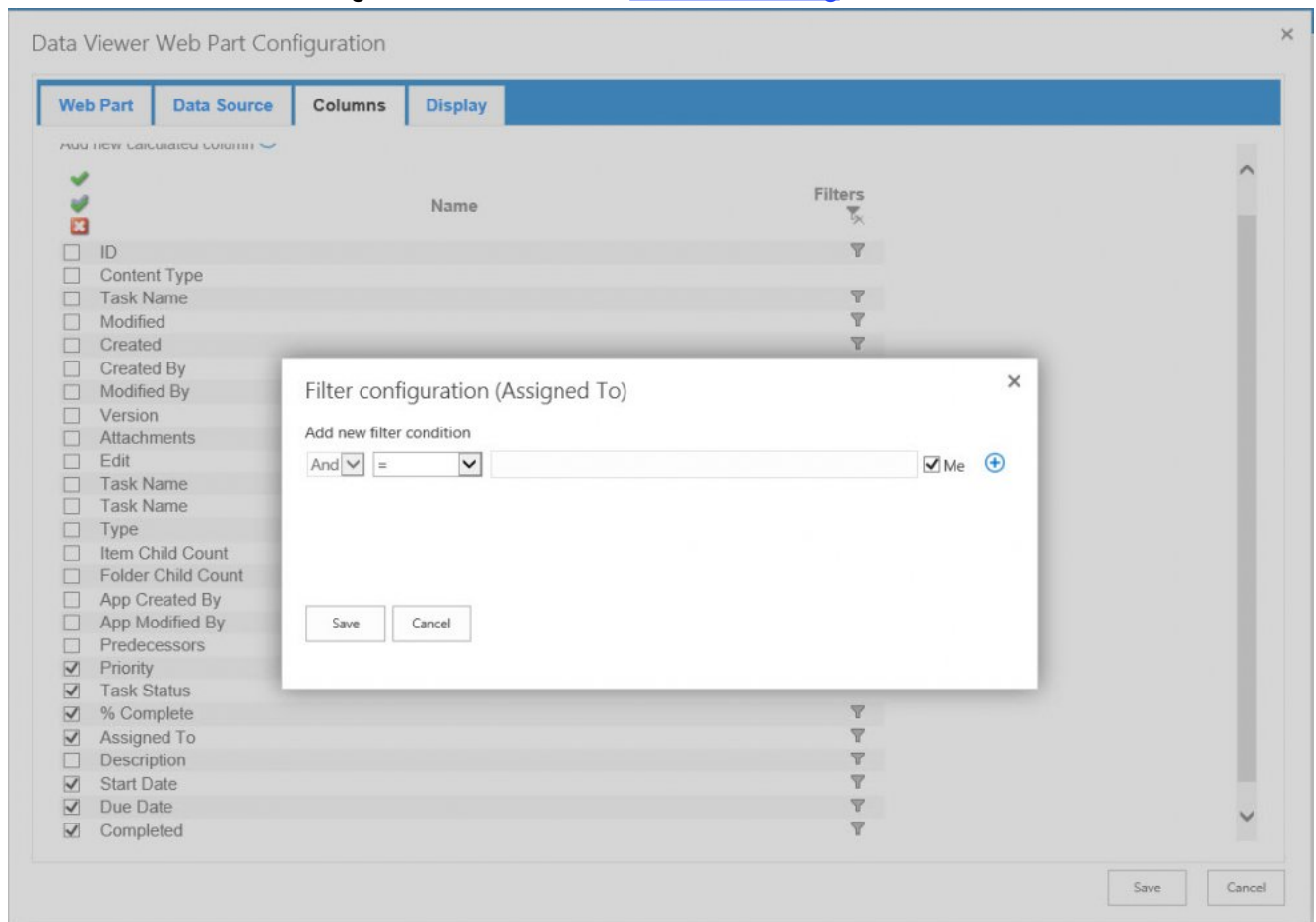
<< Data Source Tab
Column Filtering >>

Column Filtering

You can filter the number of items displayed within the Data Viewer App Part, based on one or more conditions using:

- Values in one column using the filtering icon
- Values in more than one columns using the Advanced filtering link.

Both of these options are detailed on this page.

Filtering icon

Filters can be configured on each column whether the column is displayed or not. Each column type can also provide different filtering options, for example, a Date/Time filter allows you to filter by [TODAY], a People column allows you to filter by [Me], and so on.

You can apply the filter and remove the filter using the **filtering** icon ⛛ , which displays the **Filter Configuration** dialog.

1. Select **And** or **Or** from the first list, and then select the condition from the second list, type or select a value in the third box and then click the blue plus icon ⊕.

2. Repeat the above step for each filter that you wish to configure.
3. Remove conditions by clicking the **Remove filter condition** ⊖ icon.
4. When you have added all the filters conditions you require, click **Save**.

When a filter has been configured for a column, then to the right of the **Filtering** icon ⛛ , is the **Remove Filtering** icon 🔻 . This allows you to easily identify columns that are being used to filter the contents

returned from the rollup query. To remove all persistent filters, click the **Remove Filtering** 🦅 icon, just under the **Filters** column heading. To modify a filter, click the **Filtering** icon 🗑 to display the **Filter Configuration** dialog.

Advanced Filters

Occasionally, you may want to filter on more than one column using And or Or operators. This can be done with the Data Viewer App Part using the **Advanced filtering** icon, which is display in the top right of the **Columns** section of the [Columns tab](). Each set of column condition is known as a condition group. You can have more than one column in each column group and you can have multiple column groups, for example if you want to show all high priority task that are due in the next 7 days, and all normal task that are late.
.

To filter on more than one column:

1. Click the **Advanced filtering** icon 🗑 in the top right hand corner of the **Columns** section on the **Columns** tab.
2. Click the blue plus icon ⊕ to add a new filter.
3. Select the column to apply the filter to.
4. Select the operator, such as, **Equals**. The operators displayed depend on the column type.
5. Set the value.
   Some column types contain other options, for example, a Date/Time column type, provide the ability to select today and a positive or negative offset.
6. You can repeat these steps for each column that you wish to filter on.
7. Remove conditions, by clicking the **Remove filter condition** ⊖ icon.

8. To add a new condition set, click the green plus icon ⊕ .
9. When you have configured all filtering conditions, click **Save**.

When an advanced filter has been configured, then to the right of the **Advanced Filtering** icon 🗑 , is the **Remove Filtering** icon 🦅 . This allows you to easily identify when advanced filtering is used to filter the contents returned from the rollup query. To remove the advanced filter, click the **Remove Filtering** 🦅 icon.

To modify an advanced filter, click the **Advanced Filtering** icon to display the **Advanced Filtering** dialog.

<< Columns Tab
Calculated Columns >>

Calculated Columns

With the Data Viewer App Part, you can add calculated columns to your Data Viewer views.

Microsoft® SharePoint® allows you to add a calculated column to a list or library. By creating a formula in these calculated columns you can include data from other columns and performs functions to calculate dates and times, to perform mathematical equations, or to manipulate text. In calculated columns, formulas are based on Microsoft® Excel® functions and syntax, but there are some limitations on the functions you can use and some subtleties in the syntax. You can find more information about the various kinds of formulas you can use in a SharePoint calculated columns in the Microsoft article Calculated Field Formulas.

Using the Data Viewer App Part, you add calculations similar to those you can add to a SharePoint calculated column plus you can add almost any calculation that you want. The advantage of using a Data Viewer calculated column is that the calculation is executed every time the page is displayed, whereas with a list / library calculated column, the formula is only executed when the list item or file is modified. Also, the Data Viewer calculated column, is not based on Microsoft Excel formulas, but on JavaScript based operators, calculations and functions.

As with other columns, with a Data Viewer calculated columns, you can apply conditional formatting on the calculated value, filter on the calculated column as well as sort or group by the result of the calculation. This page contains information on how to add a Data Viewer calculated column and information on formulas you can use. Other examples of calculated columns can be found on the Walkthroughs section.

Adding a Calculated Column

To add a Data Viewer calculated column, use the following steps:

1. Click the **Add calculated column** ⊕ icon in the top right hand corner of the Columns tab.
    The *Add calculated column* dialog is displayed., which contains three sections:

    - **Column name**: In the text box, type a name for the column.
    - **Column type**: Select one of the following values: **String**, **DateTime**, **Integer**, **Double** or **Boolean**. You must select the data type that is to be calculated. This may not be the same value as the columns involved in the calculation.
    - **Expression**: Use this section to create the formula for the calculated column. A formula can contain functions, column references, operators, and constants. To insert a column reference, select the column in the dropdown list and then click **Insert field**.

You must not type the column reference, you should always use the drop down list to insert references to columns. Examples of formulas can be found later on this page.

4. Once you have created finished configuring the formula, click **Save**.
    The *Add calculated column* dialog box closes and the new calculated column is displayed at the top of the columns in the *Columns Configuration* section.

5. Select the check box to the left of the column if you wish to display the column in the Data Viewer App Part. You can then drag-and-drop the column so it appears in the required order in the App Part.

| ✓ Due Date 📝 | | Text | Descending ∨ | | ✕ |
| ✓ % Complete 📝 | | Integer | None ∨ | | ✕ |

6. To edit the calculated column, click the *Edit calculated column* 📝 icon to the right of the column name.

7. To delete the calculated column, click the *Remove calculated column* ✕ icon.

← Go to top of section

Information on calculated column formulas

This section contains examples of formulas you can use in the Data Viewer calculated column. These formulas are based on the JavaScript language.

> JavaScript is a case-sensitive scripting language, which means is that the language considers capital letters as different from their lowercase counterparts. Keywords in JavaScript are all lowercase, for example, **while**, **for**, **if** and **else**. On the other hand, methods (properties) use lower CamelCase naming convention, that is, the first word is in lowercase and the first letter of each additional word is capitalized, for example, toLowerCase() and getFullYear().

Text formulas

You can use formulas to manipulate text, such as combining or concatenating the values from multiple columns, comparing the contents of columns, removing characters or spaces, and repeating characters.

1. To combine two or more columns, use the addition operator (**+**), for example to create a calculated column, *fullname*, which concatenates the columns, *Firstname* and *Lastname*, use the following formula:

    [Firstname]+" "+[Lastname]

2. Use String properties, for example, to find the length of the values stored in the *Title* column:

    [Title].length

3. Use String methods, for example,

- To convert a strings stored in the *Title* column to lower case,
    [Title].toLowerCase()
- To retrieve a substring for values stored in the *Title* column, starting from character position 5, for a length of 6 characters, where the first character of a string is position 0,
    [Title].substr(5,6)
- To remove all spaces for values stored in the *Title* column,
    [Title].replace(" ","")

Date and time formulas

JavaScript does not offer extensive date parsing or formatting. This section contains examples of manipulating out of the boxYou can use formulas to perform calculations that are based on dates and times, such as finding the day of the week, calculating the difference between two dates, and converting time to a decimal value.

1. Calculate the difference between two dates, use the subtraction operator (**–**) and then use Math object methods to present the difference as required, for example, when using a task list, create a calculated column using the following formula to display the number of days to complete a task.
    Math.floor(Math.abs([DueDate]-[StartDate])/(24*60*60*1000))

2. The date method, *getMonth*, returns a number that represents a month, for example, *0* is *January*, *1* is *February*. To return the name of the month use the following expression:
    ['January', 'February', 'March', 'April', 'May', 'June', 'July', 'August', 'September', 'October', 'November', 'December'][([LastModifiedTime].getMonth())]

3. Many of the out-of-the-box managed properties that represent date values are provided as string in the format: YYYY-MM-DDTHH:MM:SSZ, such as, 2013-11-18T08:00:00Z.

    - To display such managed properties without the characters, *T* and *Z*, use the expression,
        [DueDateOWSDate].replace(/[TZ]/g," ").
    - To convert such values so you can subtract or compare values of a date/time use the formula,
        Date.parse([DueDateOWSDate])

Conditional Formulas

You can use the formulas to test the condition of a statement and return a value. Conditional expressions take the form of a ternary operator called the conditional expression operator, **?:**, which use the following format:

  (condition)?(evaluate if condition was true):(evaluate if condition was false)

For example, if you want to create a calculated column that contains either *Before* or *After*, depending on the year the item / file was created, then the formula would look similar to:

  [DueDate]<[StartDate]?"Before":"After"

Mathematical Formula

You can use formulas to perform a variety of mathematical calculations, such as adding (**+**), subtracting (**−**), multiplying (*****), dividing numbers (**/**), remainder after dividing a number by a second number (**%**) ; and using the Math object properties and methods, for example,

1. Round values in the *NoTasks* column to the nearest integral value:

    Math.round([NoTasks])

2. Calculate the area of a circle when the value of the radius is saved in the *Radius* column:

    Math.pow([Radius],2)*Math.PI

← Go to top of section
<< Column Filtering
Display Tab >>

Display Tab

The **Display** tab is the last tab on the **Data Viewer Web Part Configuration** dialog. Use this tab to configure how the column data should be displayed by the Data Viewer App Part.

This section of the documentation describes how to use the **Display** tab when the **GridView display provider** is selected on the Web Part tab. Only those columns you selected on the Column tab are displayed in this section.

- **Display Format**: Select from the **Format** list the format for the column, for example:
  - For a text column type, such as a *Single line of text*, you can select: **None** (default) or **Hyperlink**.
  - For a Boolean column type, you can select: **None** (default), **Yes/No**, **True/False** or **Checkbox**.
  - For numerical columns you can select, **None** (default), **Currency**, **Decimal**, **Fixed Point**, **General**, **Hexadecimal**, **Number**, **Percent** and **Scientific**.
  - For Date/Time columns, you can select **None** (default), **Long Date**, **Long Data and Time**, **Long Time**, **Short Date**, **Short Date and Time**, **Short Time** and **Year And Month**. You can also type a custom date format.
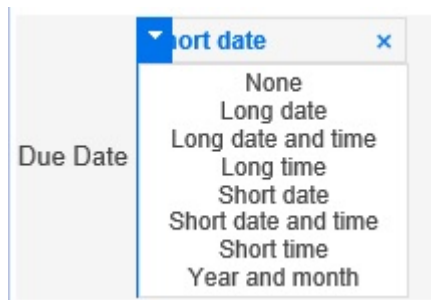
- **Alias**: Most column names are not user friendly. In the **Alias** text box, type an alternate name for the column name.

   Note: The column Name and Alias name are only displayed when the **Show header** check box is selected in the Header configuration section on the Display tab.

- **Column width**: Type in the **Width, px** text box the width of the column in pixels.

- **Grouping**: Select the **Group By** check box to group items by that column. If you wish to group using multiple columns, you can change the order of the grouping, using the Grouping and sorting section. Under **Fields to group by** drag columns in group order. The column at the top is the first column used to group the returned items.

   By default groups are expanded. To collapse groups when the Data Viewer App Part is first displayed, in the Grouping and sorting section, select **Initially collapse groups** checkbox. You can also display how many items are in a group by selecting **Show count of items in groups** check box in the Grouping and sorting section.

- **Show**: You can select whether to show column values. When you use the **Group By** check box for a column, you many not wish to display the column as values from the column are they are displayed in the group heading.

- Column Alignment. From the **Align** list, select, **Not set** (default), **Left**, **Center**, **Right**, or **Justify**.

- **Bold**, **Italic**, **Underline** check boxes.

- **Foreground** and **Background** colors

- Conditional Formatting. Conditional formatting can be set per value or per row allowing you to change formatting options only if a condition is true, for example, you could highlight any *Products* that have a *Units in Stock* less than 10 or *Tasks* assigned to you. Click the **formatting** icon to display the **Configure Conditional Formatting** dialog. Under the **Formatting**, click the **Remove all conditional formatting** icon to remove conditional formatting from all columns. Click the **Remove** icon to the right of the **formatting** icon to remove formatting from a column. See the Conditional Formatting section in this documentation for more information.

- Summarizing data. Column values can be summarised, for example, counting the number tasks displayed within the app part. Click the summary ∑ icon to display the **Configure Summary Functions** dialog. Under **Summary**, click the **Remove all summary functions** icon , to remove all summary configuration from all columns. Click the **Remove summary functions** icon to the right of the summary ∑ icon to remove the summary configuration from a column. For more information, see the Summarizing data section in this documentation.

Header Configuration, Data Connection, Grouping and Sorting, Paging Settings, Summary rows and Messages are covered in subsequent topics.

<< Calculated Columns
Conditional Formatting >>

Conditional Formatting

Conditional Formatting can be applied to a cell value or to an entire row of data. You can set the following properties:

- Apply to Entire Row (Without setting this, your formatting is set to the column value only).
- Foreground Color (Select a color or enter the RGB code)
- Background Color (Select a color or enter the RGB code)
- Set the alignment to Not set (default, **Left**, **Center**, **Right**, **Justified**.
- Select **Bold**, **Italic**, **Underline** checkboxes.

To apply condition formatting:

1. Select **And** or **Or** and then click the blue plus icon ⊕ .
2. Select the column which is to be tested. Only those columns you have selected on the Columns tab
3. Set the operator, such as, =, >, <, >= . The operators displayed depend on the column type, for example, for a text column, the operators are **Begins with**, **Contains**, **=**, **<>**, **Is Null** and **Is Not Null**.
4. Set the value.
5. Remove conditions by clicking the **Remove condition** ⊖ icon.
6. To define multiple conditions for the same formatting, click the green cross icon ✚.
7. To add a sub condition, click the blue plus icon ⊕

8. To define multiple conditional formatting click the **Add Formatting** button, for example, if you want to format Completed Tasks as Pink and High Priority tasks, that are not completed and whose Due Date has passed, as Red.

> Depending on the data type of the column, you may see different properties available such as **Today** for a *Date/Time* column type and **Me** for a *User* column type.

[<< Display Tab](#)
[Summarizing data >>](#)
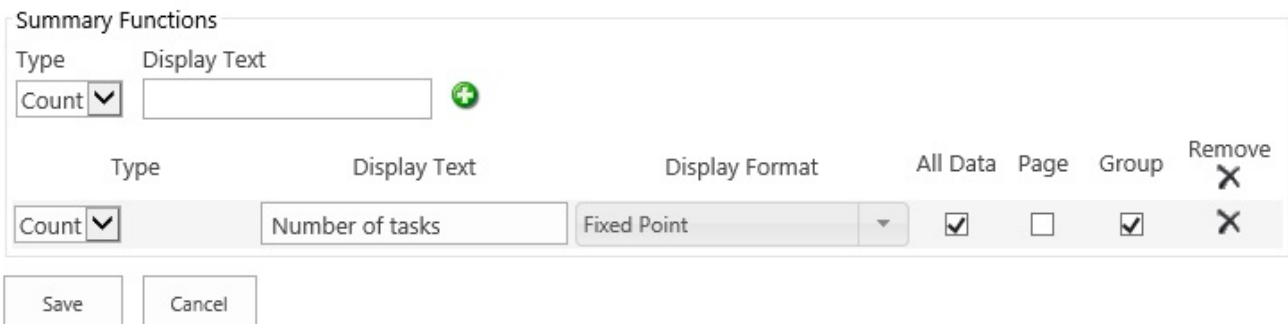
Summarizing data

The Data Viewer app can be configured to summarize the data from the data source, such as, displaying the total number of issues or the total monthly salary paid to employees. Depending on the column type, the summary types available are: count, average, minimum, maximum and sum. You can specify more than one summary type per column. Also you can have summary value for all data, per page and per group.

To summarize the data:

1. On the Display tab, click the summary icon Σ next to the column that contains the value which you want to summarize.
   The **Summary Functions** dialog is displayed.
2. Click the green plus ⊕ icon.
3. In the **Type** list, select a summary type and then in the **Display Text** box, type text that relates to summarised data, such as, **Number of Tasks**. Ensure you leave at least one space after the text you have typed, otherwise the summarised value will concatenate with your text.

Configure Summary Functions (Task Name)   ✕

Summary Functions

Type	Display Text		
Count ▾		⊕	

Type	Display Text	Display Format	All Data	Page	Group	Remove ✕
Count ▾	Number of tasks	Fixed Point ▾	☑	☐	☑	✕

Save   Cancel

4. From **Display Format** list, select how you want the numerical value formatted. Available options are: **None**, **Currency**, **Decimal**, **Fixed Point**, **General**, **Hexadecimal**, **Number**, **Percent** and **Scientific**.
5. Use the **All Data** check box to summarise all data displayed by the app part, ignoring pagination. The default is to summarise all data.
6. Use the **Page** check box when you want a summary of the values on a per page basis. Pagination within the Data Viewer app part is configured in the Page Settings section on the Display tab.
7. Use the **Group** check box to summarise column values for each group. Group summarization only takes effect when the **Group By** check box is selected. The default is for this checkbox is selected.
8. Click the green plus ⊕ icon to summarise another summary type on the same column, if required.
9. To delete a summary configuration, click the *Remove* ✕ icon.

10. When you have configured all your summary needs for this column, click **Save**.
    The remove 👆 icon appears to the right of the summary Σ icon, indicating that you have summarized data using the column.
11. To edit the summary configuration, click the summary Σ icon.

To control the position of the summarised values use the options in the Summary Rows section on the Display tab.

<< Conditional Formatting
Header Configuration >>

Header Configuration

The **Header configuration** section is on the <u>Display tab</u> of the Configure Data Viewer App dialog.

Use the options in this section, as described below:

- Select the **Show header** check box to show the column names of the columns selected on the <u>Columns tab</u>. The default is to show column names.

- From the **Header align** drop down list, select **Centre**, **Justify**, **Left**, **Not set** or **Right** to align the column names. The default is **Left**.

<u><< Summarizing data</u>
<u>Data Connection >></u>

Data Connection

Use the **Data Connection** section on the [Display](#) tab, to select the column which when clicked, opens the view item page. Use this section to enable create, update and delete operations. Therefore the Data Viewer supports CRUD operations.

Upon selecting the **Enable create**, **Enable update**, and **Update delete** check boxes, within the app part, you will see icons to the left of each row that enable you to ✕ **Delete** or 🖉 **Edit** an item, and a button at the bottom of the app part that allows you to add a new item.

[<< Header Configuration](#)
[Grouping and Sorting >>](#)

Grouping and Sorting

To group and sort by multiple columns:

1. At the top of the Display tab, first select the columns that you wish to group or sort.
2. Within the **Grouping and sorting** section:
   - Drag the column names up or down to specify the group or sort order.
   - Select the **Show item counts in groups** checkbox, to show the number of items within each group.
   - Select the **Initially collapse groups** checkbox to collapse groups when the page is first rendered by the browser.

<< Data Connection

Paging Settings >>

Paging Settings

Use the **Paging settings** section on the [Display](#) tab:

- To set the number of items to be displayed on the page with the App Part at any one time.
- Align the Page indicator, by selecting from the **Page align** list, **Not set**, **Left**, **Center** (default), **Right** or **Justify**.
- Position the page indicator, by selecting from the **Pager position** list, **Bottom**, **Top** (default) or **Top and bottom**.

[<< Grouping and Sorting](#)
[Summary Row >>](#)

Summary Row

On the Display tab, each column has a summary Σ icon that allows you to summarize items. The **Summary Rows** section on the Display tab, allows you to decide where you want the summary values displayed.

Use the options in the **Summary Rows** section, as described below:

- From **All data summary position** list, select **Bottom**, **Top** or **Top and bottom**.
  The default is **Top**.
- From the **Page summary position** list, select **Bottom**, **Top** or **Top and bottom**.
  The default is **Bottom**.
- From the **Group summary position** list, select **Bottom**, **Top** or **Top and bottom**.
  The default is **Top**.

To decide which column to summarise use the summary Σ icon on the Display tab.

<< Paging Settings
Messages >>

Messages

When there are no items to display, a message displays within the view such as **There are no items**. You can customize this message so that the message is more relevant to the list that you are displaying, for example, **There are no tasks assigned to you today.**

[<< Summary Row](#)

Walkthroughs

The following walkthroughs detail how to create solutions using Data Viewer from LightningTools. You can use these walkthroughs to customize a Data Viewer App Part or should you want to read the document without having hands on access to the Data Viewer, then the walkthroughs have sufficient screenshots for you to follow the steps.

1. Walkthrough: Use the GridView display provider to display task items from a Task list. This walkthrough uses:
   - Calculated columns.
   - filtering,
   - sorting,
   - grouping,
   - conditional formatting,
   - column linking and
   - paging.

<< Messages

Use the GridView display provider to display task items from a Task list >>

Use the GridView display provider to display task items from a Task list

This walkthrough demonstrates how to configure the Data Viewer App Part, to display non completed task items, as shown in the following screenshot.

If you have any questions please submit them on our web site page: Support Request.

This walkthrough demonstrates the following tasks:

- Selecting the **SharePoint List data source provider** and the **GridView display provider**, if not already selected.
- Limiting the App Part to display only task items.
- Select the columns you wish to display in the App Part and filter to display only tasks that are not completed, and add a calculated column to calculate the number of days between the task item start and due dates.
- Configure how you wish to display the data from the task columns.

Prerequisites

You need the following components to complete this walkthrough:

- An Office 365™ tenant.
- Data Viewer app.

If you have not already done so, complete the following steps:

1. Add the Data Viewer app to your site.
2. Add the Data Viewer App Part to a page.

Requirements

The Data Viewer App Part should be configured to:

1. Display only task items that are not completed in the current site collection.

2. The columns to be displayed are (in order): **Task Name**, **Assigned To**, **Task Status**, **Priority**, **Due Date** and **% Complete**.

3. Only non-completed task items are displayed in ascending order using the due date. Where the due date is the same for more than one task item, they should be listed in **% Completed** order, where the task item which is least completed appears first.

4. Task items are grouped by **Priority**, with **(1) High** priority task items displayed first.

5. The values in the **% Complete** column should be aligned to the right.

6. Any task whose due date has passed, all values in the entire task item row should have a font color of red.

7. A column should be created that contains the total number of days given to complete a task, that is, the calculation between the Due Date, the Start Date, plus one day.

8. The **Task Name** column should be linked to the task item's property page.

9. No more than 30 task items should be displayed in the App Part.
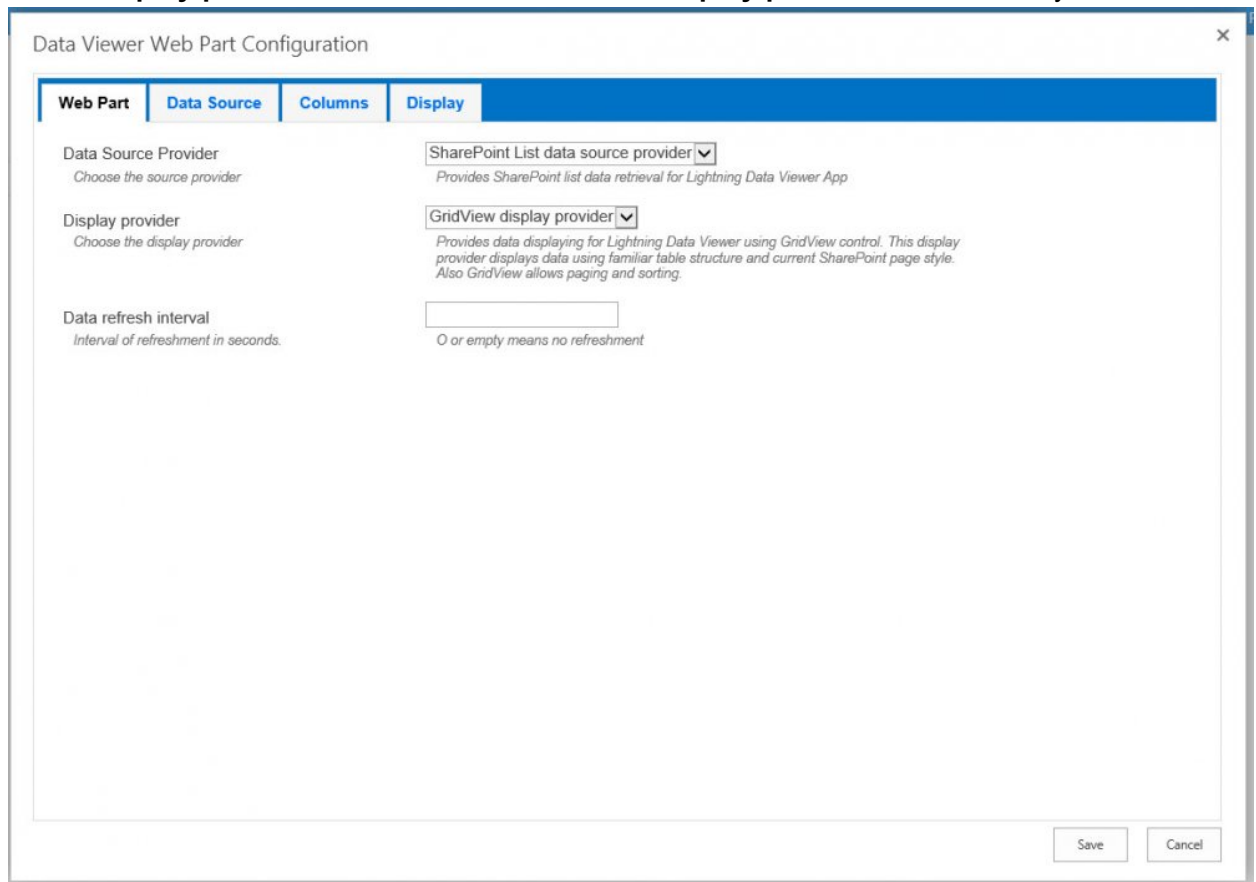
Select the Data and Display Providers

1. From the **Actions** menu, select **Configure the app**.

   The **Data Viewer App Configuration** dialog is displayed.

2. On the [Web Part](#) tab:
   - In the **Data Source Provider** section, select **SharePoint List data source provider**, if not already selected.

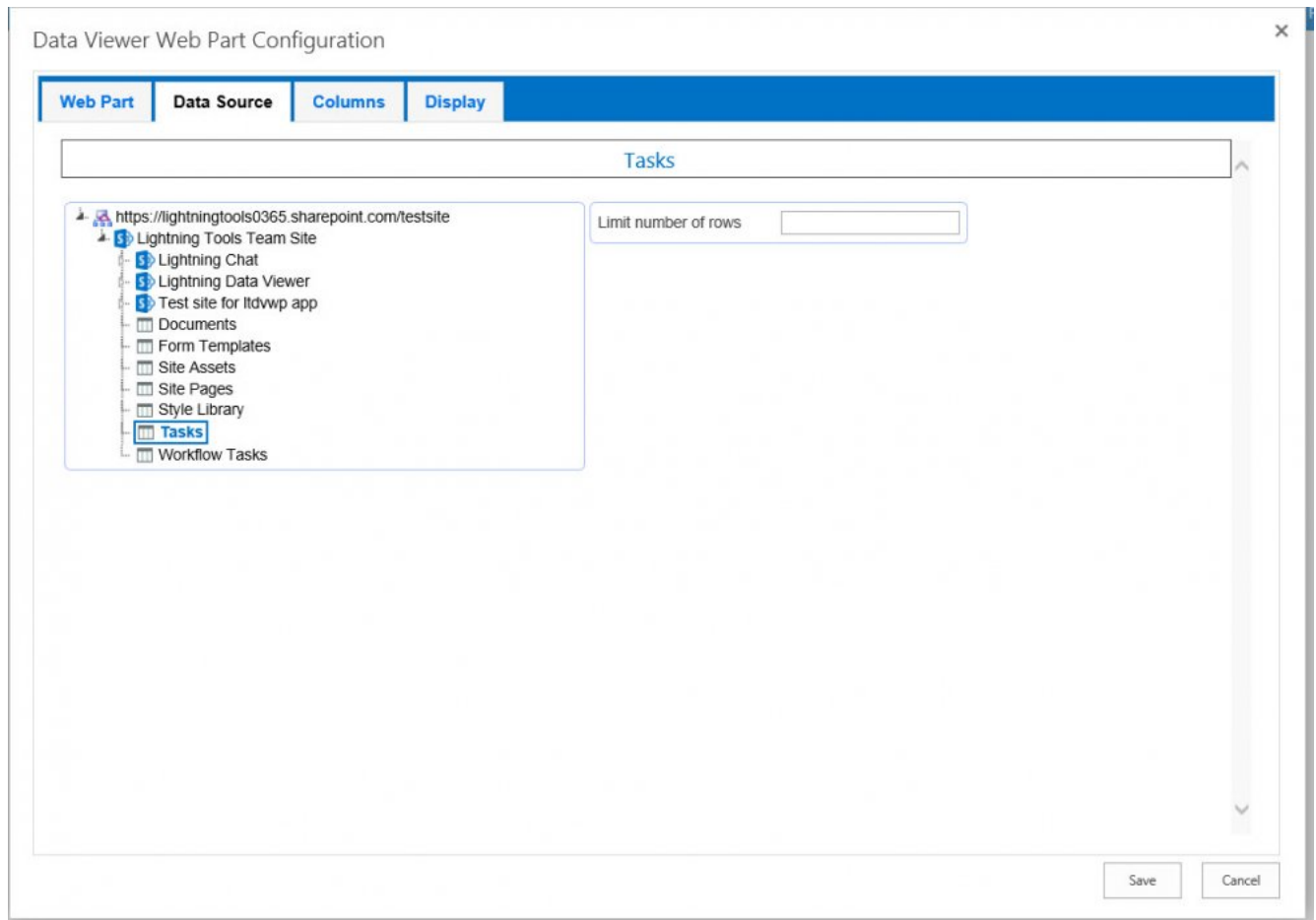- In the **Display provider** section, select **GridView display provider**, if not already selected.

Return task items from a task list

1. Click the Data Source tab.
2. In the tree view, navigate to the site that contains the task list you wish to use and then select the task list.

Select Columns

In this section you will:

- Select the columns you wish to configure on the Display tab.
- Use filtering so the app part only displays non completed task items.
- Add a calculated column to display the number of days a person has to complete the task.
- Make the **Task Name** column a hyperlink to the *View item properties * (DispForm) page.

1. Click the Columns tab.
2. Click the check boxes to the left of the following columns:
   - **Task Name**
   - **Assigned To**
   - **Task Status**
   - **Priority**

- **Due Date**
- **% Complete**

7. Drag and drop so the columns are in the order of the above list.

8. To the right of the **% Compete** column, click the <u>filtering</u> icon ▽ , to display the **Filtering configuration** dialog.

9. Under **Add new filter condition**:
   - In the second list box, select **<**.
   - In the third list box, type **1**.

Filter configuration (% Complete)   ✕

Add new filter condition

| And ∨ | < ∨ | 1 | | ⊕ |

[Save] [Cancel]

10. Click **Save** to save your filtering configurations and close the **Filtering Configuration** dialog.

11. At the top of the <u>Columns</u> tab, click the <u>Add new calculated column</u> ⊕ icon.
    The **Add new calculated column** dialog is displayed.
    - In the **Column name** text box, type, **No. of Days**.
    - From the **Column type** list, select **String**, if it is not already selected.
    - From the **Expression** list, select **Due Date [DateTime]** and then click **Insert field**.
    - Repeat the above step to add the **Start Date [DateTime]** column to the **Expression** text box.
    - In the **Expression** text box, type the following expression:
      Math.floor(Math.abs([DueDate]-[StartDate])/(24*60*60*1000))+1.

Edit calculated column   ✕

Column name   [No. of Days]

Column type   [String ∨]

Expression   [Task Name [String] ∨] [Insert field]

               [Math.floor(Math.abs([DueDate]-[StartDate])/(24*60*60*1000))+1]

                                                          [Save] [Cancel]

- Click **Save** to close the **Calculated column** dialog.

Your **Columns** tab should look similar to the following screenshot.
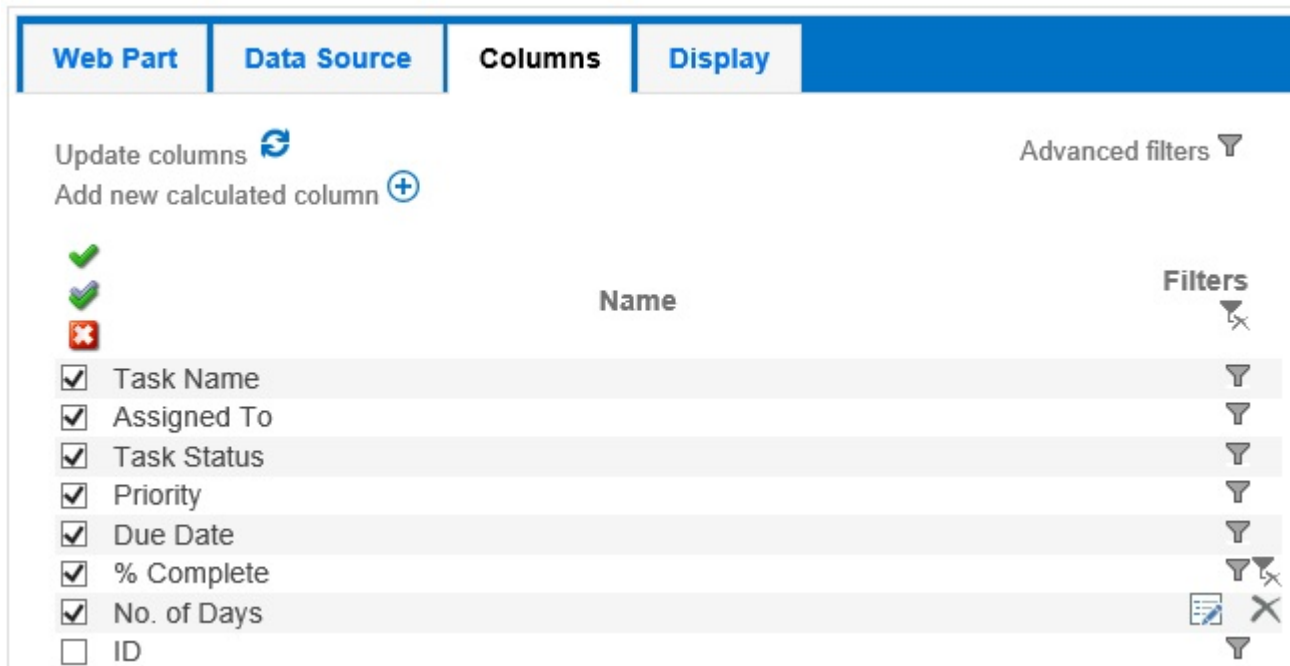
Format column data

This section describes the following configuration steps:

- Format the **Due Date** and **% Complete** columns.
- Group by Priority and sort order.
- Conditionally format High priority non completed tasks that should have been completed by today.
- Conditionally format tasks that are less than 50% complete.
- Display items in batches of up to 30 items.
- Enable create, read, update and delete (CRUD) functionality within the app part.

1. Click the Display tab.
2. In the **Format** list, for the following columns:
   - **Due Date**, select **Short date**.
   - **% Complete**, select **Percent**.
3. In the **Sort** list, select **Ascending** for the following columns:
   - **Priority**.
   - **Due Date**.
   - **%Complete**.
4. Select the **Group By** check box to the right of the **Priority** column and deselect the **Show** checkbox.

5. Click the Formatting icon for the **Due Date** column to display the **Conditional formatting** dialog.
   - Select **Apply to entire row**.
   - In the **Foreground** text box, type, **FF0000**.
   - Click the blue plus icon to add a condition.
     - In the first box, select, **Priority**, select the operation **=**, and in the third box, select **(1) High**.
   - Click the blue plus icon to add a second conditon.
     - In the first box, select **Due Date**, select the operation **<=**, and select the **Today** check box.
   - Click the blue plus icon to add a third condition.
     - In the first box, select **% Complete**, select the operation **<**, and in the third box, type **1**
   - At the bottom of the dialog, click **Add formatting** to add a new conditional formatting criteria.
   - In the **Background** text box, type, **EE00CC**.
   - Click the blue plus icon to add a condition.
     - In the first box, select **% Complete**, select the operation **<**, and in the third box, type **0.5**.

   - Click **Save** to close the dialog.

6. In the Data connection section:
   - In the **Link item to column** list, select **Task Name**.
   - Select the three check boxes, **Enable create**, **Enable edit** and **Enable delete**.

7. In the Grouping and sorting section:

   • Select the **Show item count in groups** check box.

   • Under **Fields to sort by**, drag and drop the columns so they are in the order, **Priority**, **Due Date** and **% Complete**.

8. In the Page settings section, type **30** in the **Records per page** text box.

The **Display** tab should look similar to the following screenshot.

9. Click **Save** to close the **Data Viewer App Configuration** dialog. This completes the configuration of the Data Viewer App Part.

<< Walkthroughs