



Lightning Conductor Web Part 2013

Manual

3.0 — Last update: 2014/12/19

Lightning Tools

Table of Contents

Installing the Lightning Conductor 2013 Web Part.....	2
Uploading the Lightning Conductor solution package	3
Deploying the Lightning Conductor solution	4
Licensing the Lightning Conductor Web Part.....	7
Activate with Internet access	9
Activate without Internet access.....	12
Activate the Lightning Conductor Web Part site collection feature	15
Upgrading the Lightning Conductor Web Part.....	18
Configuring the Lightning Conductor Web Part Caching Engine	21
Testing the installation	28
Creating pages	29
Creating a wiki page	30
Creating a Web Part page	31
Using the Lightning Conductor 2013 Web Part	33
Adding Web Parts to a page.....	35
Add a Web Part to a wiki page	36
Add a Web Part to a Web Part page	38
Configuring the Lightning Conductor Web Part.....	40
Using Multiple Views.....	42
Enable Views	43
Create a View.....	45
Configure View	46
Dynamically selecting a view	47
Web Part tab.....	50
Using an XSLT view	52
Pre-defined XSLT Files	53
Uploading Custom XSLT views	55
Using the JSON Display Provider	56
Data Source tab.....	59
Rollup Source.....	60
Show Selection of Lists for Columns.....	65
List / Item Types	66
Caching Settings	69
Audience Targeting Settings.....	72
Filtering Settings	73
Miscellaneous	75

Columns tab	76
Columns Configuration	77
Calculated Columns	80
Grouping	85
Column Filtering	86
Conditional Formatting	89
Display tab.....	92
Pagination	93
Grouping and Linking	94
Miscellaneous	96
How to Configure LCWP Programmatically	97
Troubleshooting	103
Statistical Information.....	104
Licensing Error.....	105
Missing: Lightningconductor2013webpart.wsp solution	106
Missing: Manage Lightning Tools Product Licencing link	107
Missing: Lightning Tools Web Parts category in the Web Part pane	109
Missing: Lightning Conductor Web Part in the Web Part pane	110
Missing: Lightning Conductor Web Part site collection feature.....	111
Lightning Conductor 2013 V2.1.0.0 Improvements.....	112
Lightning Conductor 2013 v3.0 Improvements	114

Installing the Lightning Conductor 2013 Web Part

This section contains information on how to install the [Lightning Conductor Web Part](#) (LCWP) for [Microsoft® SharePoint® 2013](#). It is essential to read and complete the installation steps before you can add the [Lightning Conductor Web Part](#) to a SharePoint page. Information on [using](#) and [configuring](#) the LCWP can be found later in the documentation.

As the [Lightning Conductor Web Part](#) is a [SharePoint® 2013 farm solution](#), you may need to raise a change request to install the SharePoint farm solution in your organisation's production or system integration SharePoint farms. As this is a farm solution it cannot be install in Office 365™.

Once you have installed the [Lightning Conductor Web Part](#) farm solution you should test the installation by adding one of the Web Part to either a wiki page or a Web Part page in the site collection where you have activated the Lightning Conductor 2013 Web Part site collection feature.

Use the following steps to install the [Lightning Conductor Web Part](#):

1. [Upload the LightningConductor2013webpart.wsp solution package to the SharePoint® 2013 farm.](#)
2. [Deploy the solution to the required Web Applications.](#)
3. [Activate the Lightning Conductor 2013 license key if you are not using the trial version of the Web Part.](#)
4. [Activate the Lightning Conductor Web Part site collection feature on the required site collections](#)
5. [Test the installation by adding the Web Part to a page](#)

From time to time we will provide an [update](#) for the web part. This is on average every 12 weeks.

[Uploading the Lightning Conductor solution package —>](#)

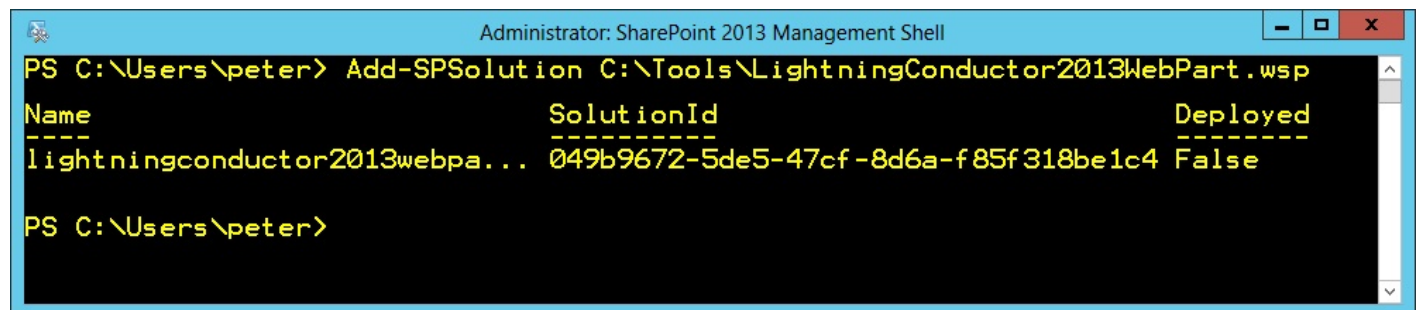
Uploading the Lightning Conductor solution package

To upload the LightningConductor2013WebPart.wsp to your [Microsoft® SharePoint® 2013](#) server farm, complete the following steps using the [Add-SPSolution Windows PowerShell®](#) command:

Which ever method you choose to deploy the farm solution you must be a SharePoint farm administrator. More information on how to make a user a SharePoint farm administrator, see the LightningTools blog post: [When is a SharePoint Farm Administrator not a SharePoint Farm Administrator](#).

1. Unzip the downloaded Lightning Conductor Web Part zip file to your computer.
2. Copy LightningConductor2013webpart.wsp to a folder on your SharePoint 2013 server, for example **c:\Tools**.
3. Open the SharePoint 2013 Management Shell and type on one line,
`Add-SPSolution c:\Tools\LightningConductor2013WebPart.wsp`
replacing `c:\tools` with the location where you stored the wsp file.

Note: Do not copy and paste this command from this page, as hidden characters may be included which will cause the Windows PowerShell® command to fail in your environment.



```
Administrator: SharePoint 2013 Management Shell
PS C:\Users\peter> Add-SPSolution C:\Tools\LightningConductor2013WebPart.wsp
Name                               SolutionId                         Deployed
----                               -
lightningconductor2013webpa... 049b9672-5de5-47cf-8d6a-f85f318be1c4 False
PS C:\Users\peter>
```

More information on the SharePoint 2013 Management Shell can be found at: [Accessing Windows PowerShell for SharePoint 2013](#)

[Install and manage solutions for SharePoint 2013 →](#)
[Deploying the Lightning Conductor solution →](#)

Deploying the Lightning Conductor solution

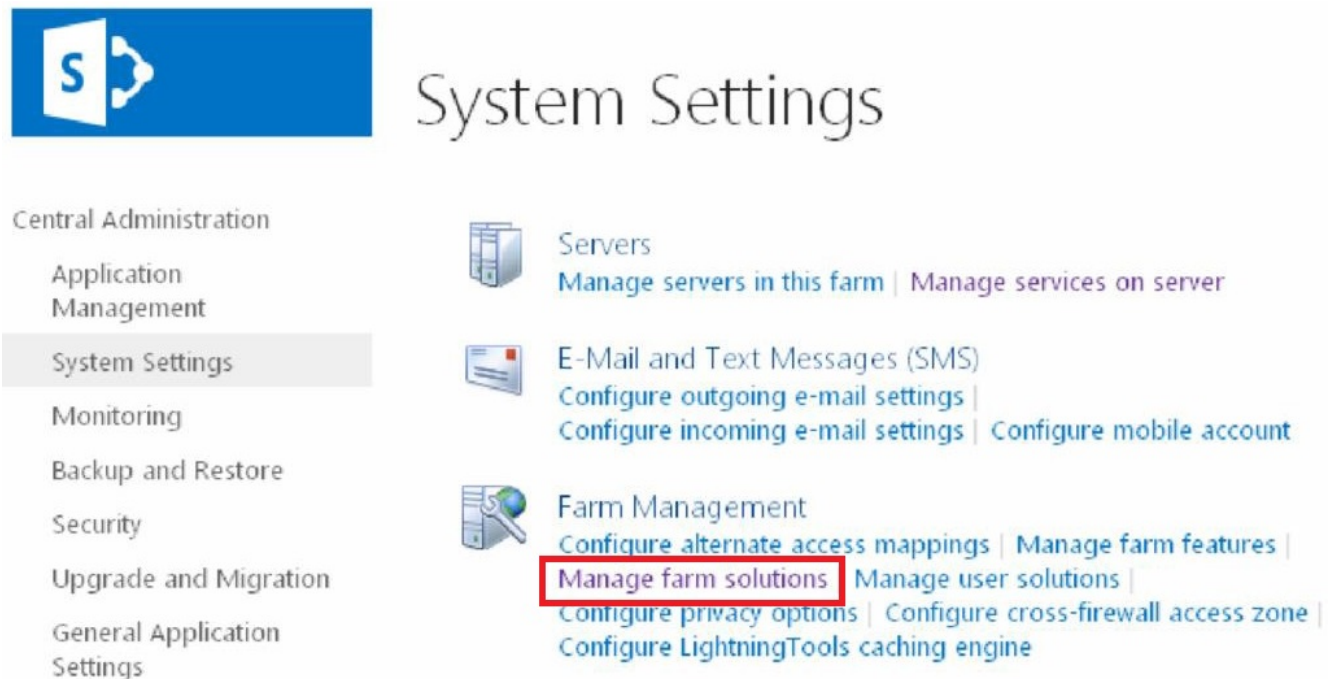
To deploy a [Microsoft® SharePoint® 2013](#) farm solutions to a Web Application you can use [Windows PowerShell®](#) commands or the [SharePoint 2013 Central Administration](#) web site.

Which ever method you choose to deploy the farm solution you must be a SharePoint farm administrator. More information on how to make a user a SharePoint farm administrator, see the LightningTools blog post: [When is a SharePoint Farm Administrator not a SharePoint Farm Administrator](#).

Using the SharePoint 2013 Central Administration web site

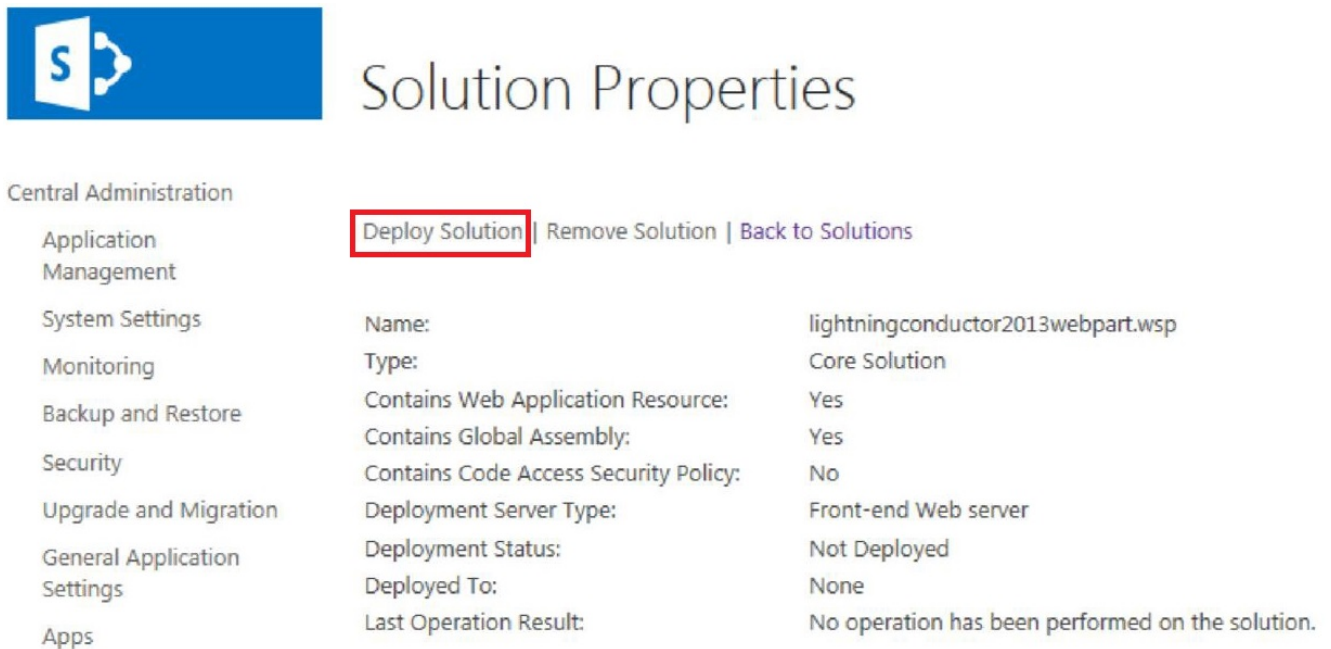
The following instructions use the SharePoint 2013 Central Administration web site to deploy the farm solution.

1. In the browser, open Microsoft SharePoint Central Administration web site. On the Quick Launch click **System Settings**, and then under **Farm Management**, click **Manage farm solutions**.



2. On the **Solution Management** page, click **Lightningconductor2013webpart.wsp**.

3. On the **Solution Properties** page, click **Deploy Solution**.

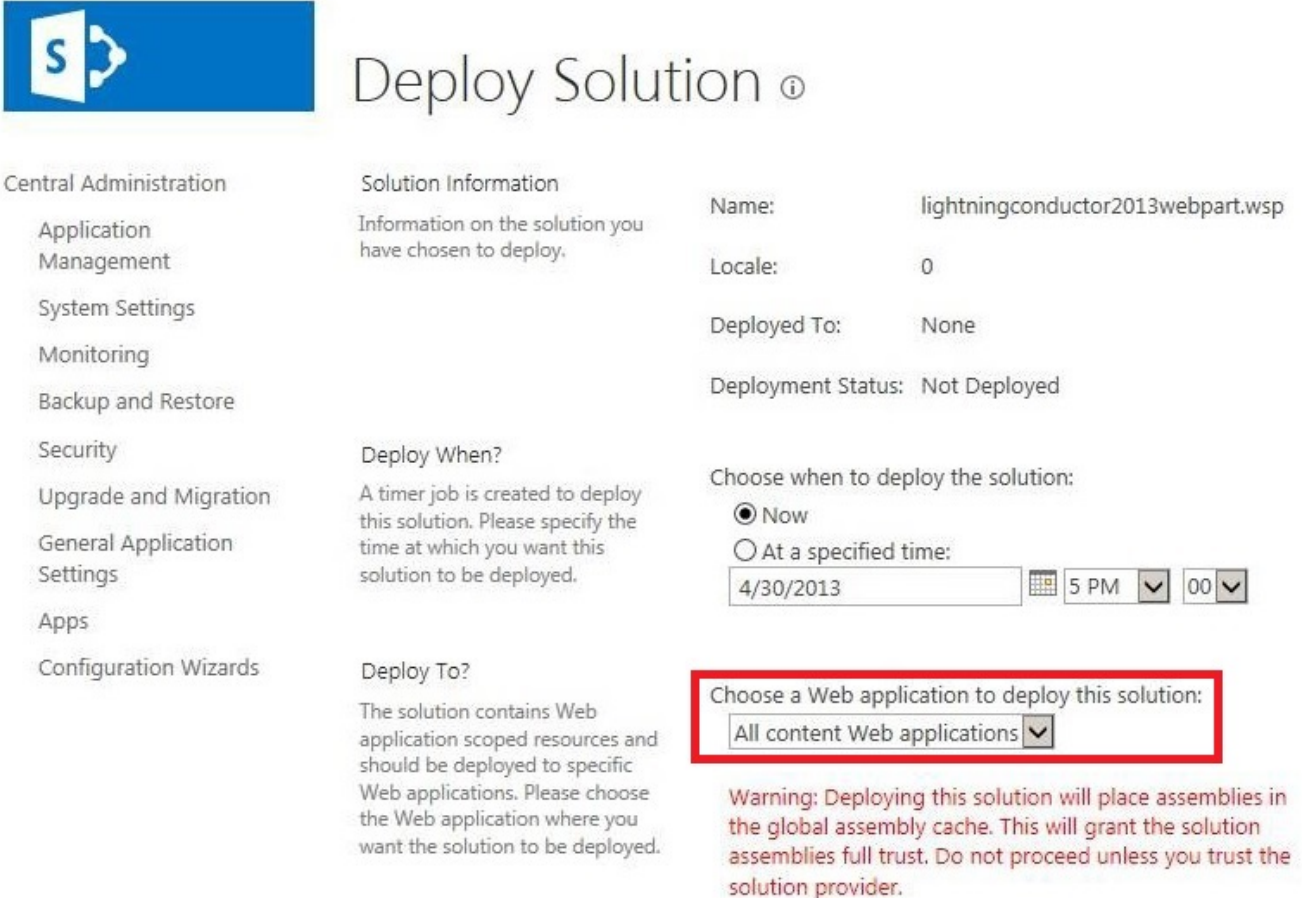


The screenshot shows the 'Solution Properties' page in a web application. At the top left is a blue header with a white 'S' and a right-pointing arrow. To its right is the title 'Solution Properties'. Below the header is a left-hand navigation menu with the following items: 'Central Administration', 'Application Management', 'System Settings', 'Monitoring', 'Backup and Restore', 'Security', 'Upgrade and Migration', 'General Application Settings', and 'Apps'. To the right of the menu, there are three links: 'Deploy Solution' (highlighted with a red rectangle), 'Remove Solution', and 'Back to Solutions'. Below the links is a table of solution properties.

Name:	lightningconductor2013webpart.wsp
Type:	Core Solution
Contains Web Application Resource:	Yes
Contains Global Assembly:	Yes
Contains Code Access Security Policy:	No
Deployment Server Type:	Front-end Web server
Deployment Status:	Not Deployed
Deployed To:	None
Last Operation Result:	No operation has been performed on the solution.

4. On the **Deploy Solution** page, in the **Deploy To?** section, in the dropdown list select the Web application where you want to deploy the solution or select **All content Web applications** if you want

to use the Lightning Conductor Web Part in all sites in all Web applications.



The screenshot shows the 'Deploy Solution' page in a SharePoint administration interface. On the left is a navigation menu with options like 'Central Administration', 'Application Management', 'System Settings', 'Monitoring', 'Backup and Restore', 'Security', 'Upgrade and Migration', 'General Application Settings', 'Apps', and 'Configuration Wizards'. The main content area is titled 'Deploy Solution' with an information icon. It is divided into three sections: 'Solution Information', 'Deploy When?', and 'Deploy To?'. The 'Solution Information' section shows the solution name as 'lightningconductor2013webpart.wsp', locale as '0', deployed to 'None', and deployment status as 'Not Deployed'. The 'Deploy When?' section has two radio buttons: 'Now' (selected) and 'At a specified time:'. The 'At a specified time' option is expanded, showing a date of '4/30/2013', a time of '5 PM', and a dropdown for '00'. The 'Deploy To?' section contains a dropdown menu labeled 'Choose a Web application to deploy this solution:' with 'All content Web applications' selected. This dropdown is highlighted with a red rectangle. Below the dropdown is a warning message: 'Warning: Deploying this solution will place assemblies in the global assembly cache. This will grant the solution assemblies full trust. Do not proceed unless you trust the solution provider.'

Central Administration

- Application Management
- System Settings
- Monitoring
- Backup and Restore
- Security
- Upgrade and Migration
- General Application Settings
- Apps
- Configuration Wizards

Deploy Solution ⓘ

Solution Information
Information on the solution you have chosen to deploy.

Name: lightningconductor2013webpart.wsp

Locale: 0

Deployed To: None

Deployment Status: Not Deployed

Deploy When?
A timer job is created to deploy this solution. Please specify the time at which you want this solution to be deployed.

Choose when to deploy the solution:

☒ Now

☐ At a specified time:

4/30/2013 5 PM 00

Deploy To?
The solution contains Web application scoped resources and should be deployed to specific Web applications. Please choose the Web application where you want the solution to be deployed.

Choose a Web application to deploy this solution:

All content Web applications ▼

Warning: Deploying this solution will place assemblies in the global assembly cache. This will grant the solution assemblies full trust. Do not proceed unless you trust the solution provider.

5. Click **OK**

[Licensing the Lightning Conductor Web Part —>](#)

Troubleshooting: If the **Lightningconductor2013webpart.wsp** solution is missing on the **Solution Management** page, upload the **Lightning Conductor** solution package using the [Add-SPSolution](#) Windows PowerShell® command.

Licensing the Lightning Conductor Web Part

The [Lightning Conductor Web Part](#) for [Microsoft® SharePoint® 2013](#), is available as a [14 day trial](#). You can use the full functionality of the Web Part for 14 days upon which the product will need to be [licensed](#). The number of days remaining in your [trial](#) will be shown within the Web Part. When the 14 day [trial](#) period has expired, the Web Part will display that it is unlicensed and will no longer function until you licensed it.

Lightning Conductor

You're using trial version of **Lightning Conductor Web Part** (14 days left).

Please, contact [Lightning Tools Ltd.](#) to purchase full version of **Lightning Conductor Web Part** and learn more about great SharePoint Tools and Web Parts.

View ▸ **Tasks** ▾

Task Name	% Complete	Assigned To	Task Status	Due Date	Priority
(2) Normal					
Completed					
Task5	1	SP2013\brett	Completed	5/5/2013	(2) Normal
In Progress					
Task2	0.5	SP2013\brett	In Progress	4/4/2013	(2) Normal
Task4	0.5	Zoe	In Progress	6/6/2013	(2) Normal
Task5	0.25	SP2013\brett	In Progress	7/7/2013	(2) Normal
Not Started					
Task1	0	SP2013\brett	Not Started	1/4/2013	(2) Normal

When you purchase the Lightning Conductor Web Part for SharePoint® 2013, you will need to inform [Lightning Tools](#) of the number of Web Front-ends and the number of SharePoint farms you wish to purchase a license, including production and non-production SharePoint environments. We will then provide you with a valid license key for each SharePoint farm where you want to use the Lightning Conductor Web Part.

For licensing purposes, a SharePoint Web Front-end (WFE) is a server that has the [Microsoft SharePoint Foundation Web Application](#) service started.

Once you have purchased the Web Part and have received the license key, you need to enter the key and activate the product via the Lightning Tools license manager which can be found in SharePoint 2013 Central Administration web site.

You can activate the Lightning Conductor Web Part over the [Internet](#) or [manually](#). Once a license key is activated, it will be associated with a specific SharePoint farm, and can not be activated on a different SharePoint farm. License keys are also specific to a [Lightning Tools](#) product, therefore you need a license key for each [Lightning Tools](#) product.

[Activate with Internet access —>](#)

[Activate without Internet access →](#)

[Plan service deployment in SharePoint 2013 →](#)

[Start or stop a service \(SharePoint 2013\) →](#)

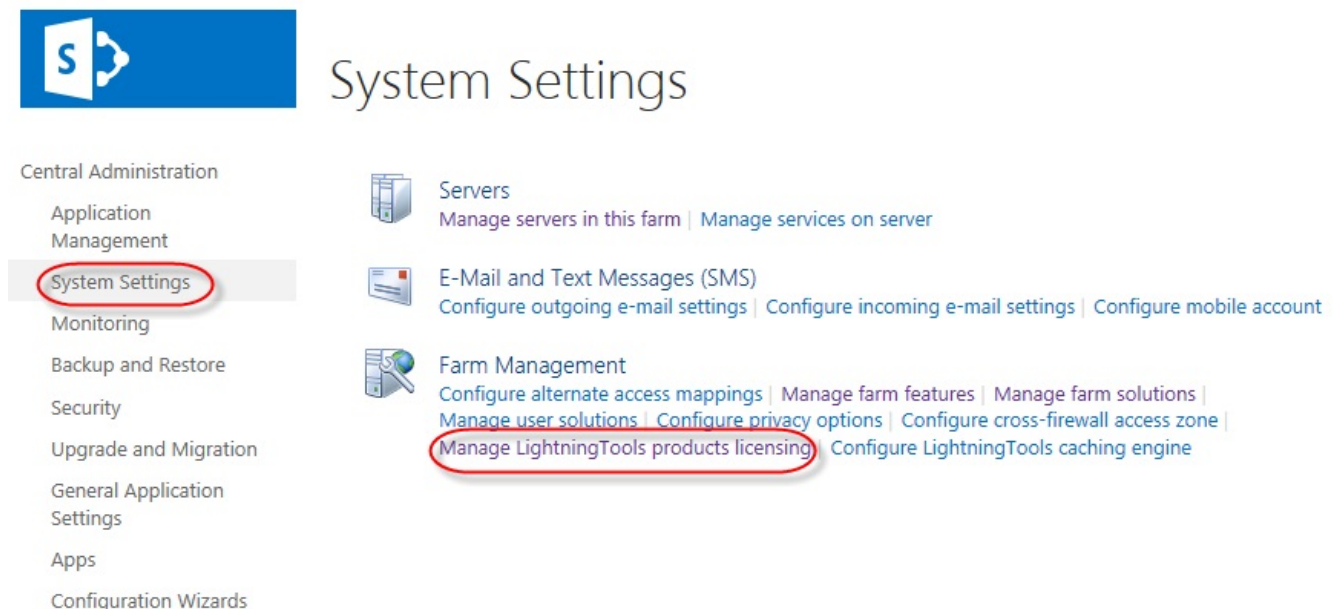
Troubleshooting: [Licensing Error](#)

Activate with Internet access

To automatically activate the [Lightning Conductor Web Part](#) when your [Microsoft® SharePoint® 2013](#) server has Internet access, complete the following steps:

You will need to be a SharePoint server farm administrator to complete these steps.

1. In the browser, open SharePoint 2013 Central Administration web site.
2. On the Quick Launch, click **System Settings**, and then under **Farm Management** click **Manage LightningTools products licensing**.



3. From the **Choose Product** drop down list, select the **Lightning Conductor 2013**.
4. In the **License Key** text box, type the license key sent to you when you [completed your purchase](#) of the Web Part.
5. In the **User Email** text box, type your email address.
6. In the **Organization** text box, type your organization or company name.
7. In the **User Name** text box, type your first name and last name.

8. Click **Activate**.

Search this site...

Licensing of Product 'Lightning Conductor 2013'

Central Administration

- Application Management
- System Settings
- Monitoring
- Backup and Restore
- Security
- Upgrade and Migration
- General Application Settings
- Apps
- Configuration Wizards
- Site Contents

Product
Choose the product, licensing of which you want to manage.

Choose Product
Lightning Conductor 2013

License Status
Your trial is valid. 14 days left.

Activation Data
Fill data for product activation.

License Key*
f60fb38f-846b-4845-8f53-8e9ed75b09ff-03

User Email*
brett@lightningtools.com

Organization
Lightning Tools

User Name
Brett Lonsdale

Activate Manual Activation Cancel

The page is redisplayed with a **License Status: The Product is properly licensed.**

The [Lightning Conductor Web Part](#) license is now activated and registered. You can check the license information within each instance of the Lightning Conductor Web Part by selecting **Edit Web Part** on the

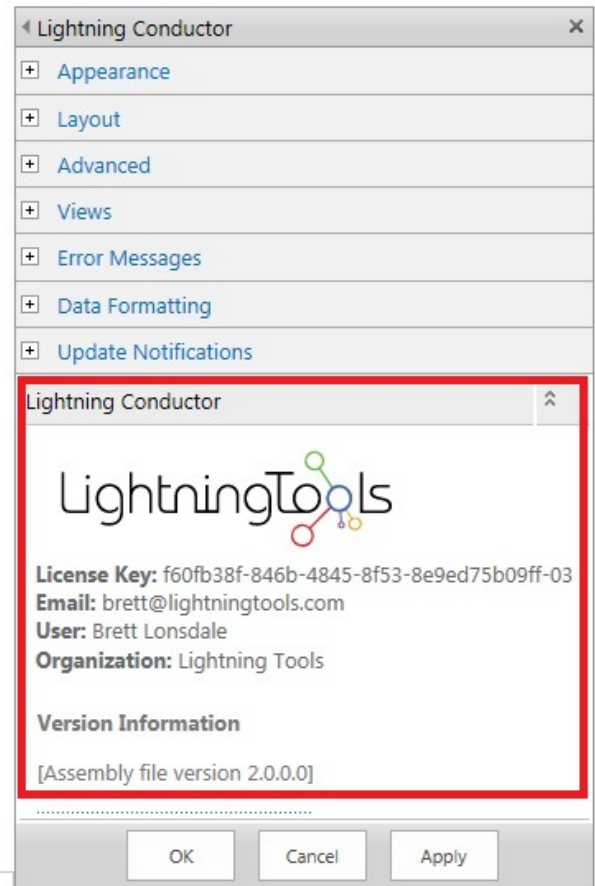
Web Part menu.

Lightning Conductor

View ▾ Tasks ▾

Task Name	% Complete	Assigned To	Task Status	Due Date	Priority
(2) Normal					
Completed					
Task5	1	SP2013 \brett	Completed	5/5/2013	(2) Normal
In Progress					
Task2	0.5	SP2013 \brett	In Progress	4/4/2013	(2) Normal
Task4	0.5	Zoe	In Progress	6/6/2013	(2) Normal
Task5	0.25	SP2013 \brett	In Progress	7/7/2013	(2) Normal
Not Started					
Task1	0	SP2013 \brett	Not Started	1/4/2013	(2) Normal

Bottom



If you have purchased a license of the product already and believe that the information in the Web Part tool pane is incorrect, please contact Lightning Tools by clicking [Submit Support Ticket](#) on [Lightning Tools](#) web site. We will then gladly provide you with a license key.

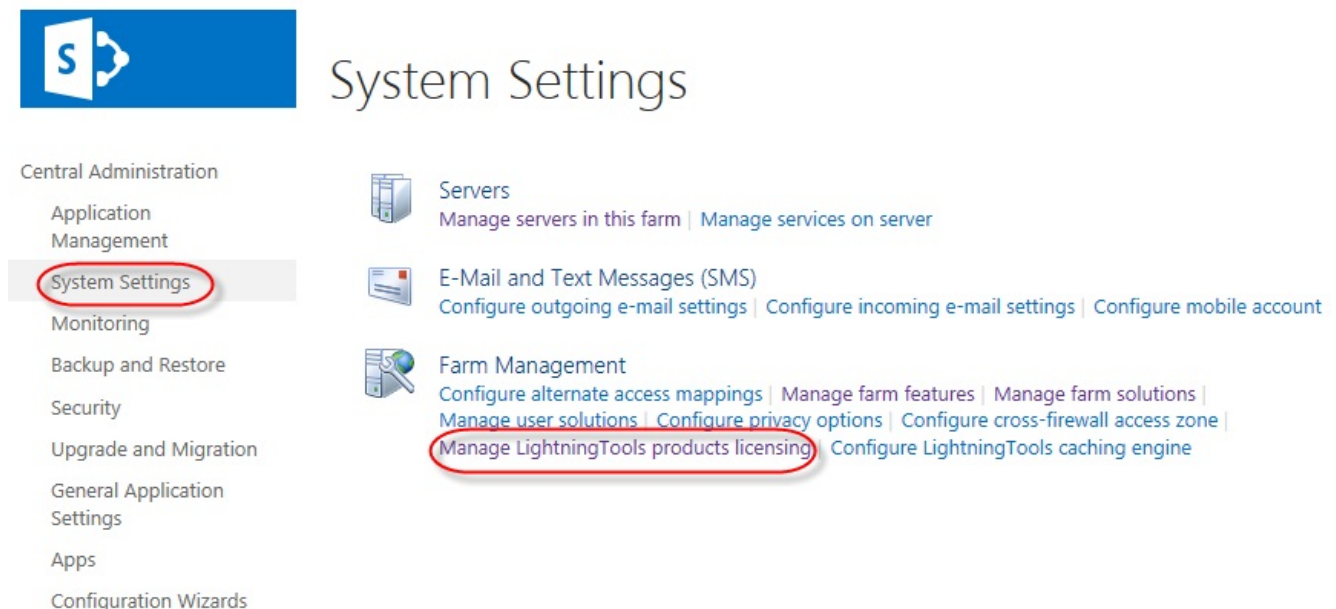
Troubleshooting: [Licensing Error](#)

Activate without Internet access

Use the following steps to activate the [Lightning Conductor Web Part](#) when your [Microsoft® SharePoint® 2013](#) server does not have Internet access:

You will need to be a SharePoint server farm administrator and be able to send emails, to complete these steps.

1. In the browser, open SharePoint 2013 Central Administration web site.
2. On the **System Settings** page, under **Farm Management**, click **Manage LightningTools products licensing**.



3. From the **Choose Product** drop down list, select the **Lightning Conductor 2013**.
4. In the **License Key** text box, type the license key sent to you when you [completed your purchase](#) of the Web Part.
5. In the **User Email** text box, type your email address.
6. In the **Organization** text box, type your organization or company name.
7. In the **User Name** text box, type your first name and last name.
8. Now complete one of the following steps.
 - If the server that you are using has mail access, click **Send Activation Email** to send an email to Lightning Tools with your identity key and license key, which is used to generate the license.

Or

- Copy the contents from **License Information** text box, and save it in a manner so you have access to that information from another computer.
- On a computer where you can send emails, paste the *License Information* into the body of the email, and send to support@lightningtools.com with a **Subject** line of: **Lightning Conduction Web Part 2013 activation request.**

The screenshot shows an email client window on the left and a web-based license activation form on the right.

Email Client (Left):

- To:** support@lightningtools.com
- Subject:** Lightning Conductor 2013 activation for Brett Lonsdale
- Body:**

```
Key: 0a8bb385-9baf-448d-969e-c4e501c4d9c4-03
Identity: 9257a238-3090-490b-8e5f-1c22f3a78340
Product name: Lightning Conductor 2013
Organization: Lightning Tools
User name: Brett Lonsdale
User email: brett@lightningtools.com
```

Web Form (Right):

- License Key*:** 0a8bb385-9baf-448d-969e-c4e501c4d9c4-03
- User Email*:** brett@lightningtools.com
- Organization:** Lightning Tools
- User Name:** Brett Lonsdale
- License Information:**

```
<?xml version="1.0" encoding="utf-16"?>
<License>
  <Id>c69a405b-9474-4788-983a-ea31ee12f4d9</Id>
  <Type>Trial</Type>
  <Expiration>Wed, 14 Aug 2013 13:56:03 GMT</Expiration>
  <ProductFeatures>
    <Feature name="User Identity">9257a238-3090-490b-8e5f-1c22f3a78340</Feature>
    <Feature name="Product">Lightning Conductor 2013</Feature>
  </ProductFeatures>
</License>
```

Buttons: Send Activation Email, Save License, Register Online, Cancel

4. Activation information will be sent in an email to the email address you provided in step 5. The email contains an XML license which can be pasted in the **License Information** text box replacing the existing contents.
5. Click **Save License**.

The [Lightning Conductor Web Part](#) license is now activated and registered. You can check the license information within each instance of the Lightning Conductor Web Part by selecting **Edit Web Part** on the

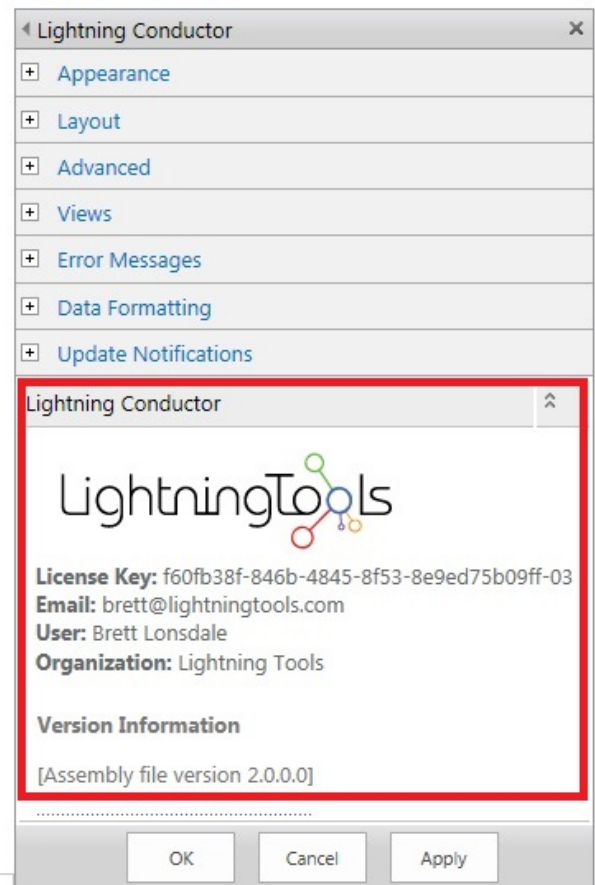
Web Part drop down menu.

Lightning Conductor

View ▾ Tasks ▾

Task Name	% Complete	Assigned To	Task Status	Due Date	Priority
(2) Normal					
Completed					
Task5	1	SP2013 \brett	Completed	5/5/2013	(2) Normal
In Progress					
Task2	0.5	SP2013 \brett	In Progress	4/4/2013	(2) Normal
Task4	0.5	Zoe	In Progress	6/6/2013	(2) Normal
Task5	0.25	SP2013 \brett	In Progress	7/7/2013	(2) Normal
Not Started					
Task1	0	SP2013 \brett	Not Started	1/4/2013	(2) Normal

Bottom



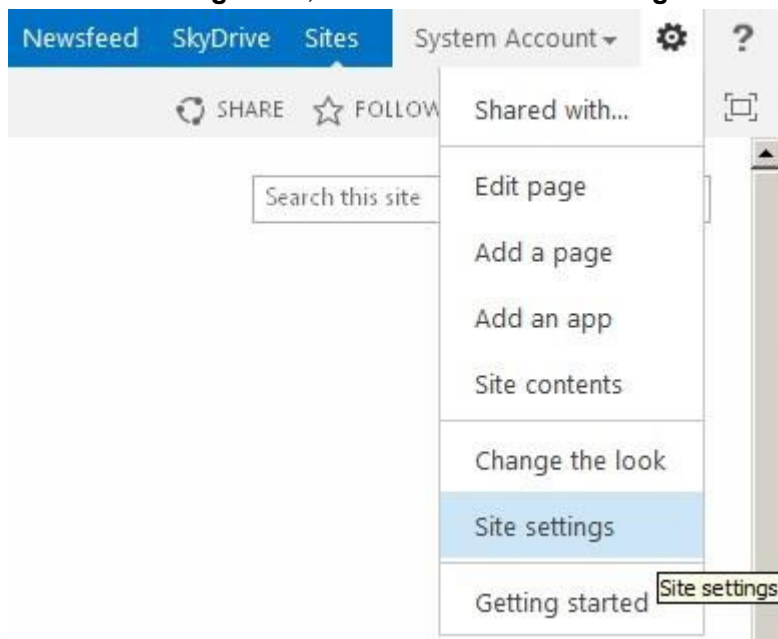
[Installing the Lightning Conductor 2013 Web Part →](#)

Activate the Lightning Conductor Web Part site collection feature

Before you can add the [Lightning Conductor Web Part](#) to a [Microsoft® SharePoint® 2013](#) page, the Lightning Conductor site collection feature must be activated. Use the following steps to activate the Lightning Conductor Web Part site collection feature:

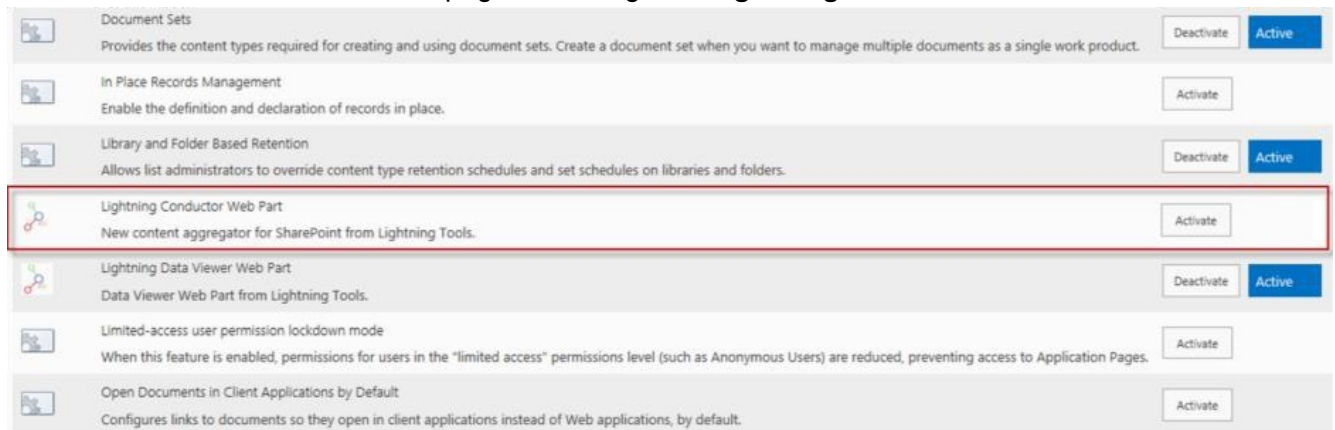
You must be a [site collection administrator](#) to complete these steps.

1. In the browser, open the top level site of the site collection where your site exists.
2. Click the **Settings** icon, and then click **Site settings**.



3. On the **Site Settings** page, under **Site Collection Administration**, click **Site collection features**.

4. On the **Site Collection Features** page, to the right of **Lightning Conductor Web Part** click **Activate**.


















The page will refresh and the feature is identified as being Active. You are now ready to add the Web Part to your page.

If you do not see the **Site collection features** link under **Site Collection Administration**, you are probably at a child site within the site collection. Under **Site Collection Administration**, click **Go to top level site** settings to navigate to the top of the site collections, and then repeat step 3.

Once the Lightning Conductor Web Part site collection feature is activated, then in the Web Part gallery you should see five Web Parts:

- LightningConductorAnnouncementsWebPart.webpart
- LightningConductorDocumentsWebPart.webpart
- LightningConductorEventsWebPart.webpart
- LightningConductorTasksWebPart.webpart
- LightningConductorWebPart.webpart

	LightningConductorAnnouncementsWebPart.webpart 		12/2/2014 10:58 AM	<input type="checkbox"/>	Brett
	LightningConductorDocumentsWebPart.webpart 		12/2/2014 10:58 AM	<input type="checkbox"/>	Brett
	LightningConductorEventsWebPart.webpart 		12/2/2014 10:58 AM	<input type="checkbox"/>	Brett
	LightningConductorTasksWebPart.webpart 		12/2/2014 10:58 AM	<input type="checkbox"/>	Brett
	LightningConductorWebPart.webpart 		12/2/2014 11:17 AM	<input type="checkbox"/>	Brett

You can view the Web Part gallery from the top-level site of the site collection, by clicking **Web parts**, under **Web Designer Galleries** on the **Site Settings** page.

When you [add a Web Part to a page](#), then in the Web Part pane, under the Lightning Tools Web Part category, you should see the following Web Parts:

- Announcements Rollup
- Documents Rollup
- Events Rollup
- Lightning Conductor
- Tasks Rollup

[Upgrading the Lightning Conductor Web Part —>](#)

[Using the Lightning Conductor Web Part →](#)

[More information on site collection features →](#)

Upgrading the Lightning Conductor Web Part

To upgrade to the latest version of the [Lightning Conductor Web Part](#), use the following steps:

Which ever method you choose to deploy the farm solution you must be a SharePoint farm administrator. More information on how to make a user a SharePoint farm administrator, see the LightningTools blog post: [When is a SharePoint Farm Administrator not a SharePoint Farm Administrator](#).

1. Download the latest version from your customer portal or the [downloads](#) section of our web site.
2. Unzip the downloaded Lightning Conductor Web Part zip file to your computer.
3. Copy **LightningConductor2013WebPart.wsp** to a folder on your SharePoint 2013 server, for example **c:\tools**, if you did not unzip the download file to the SharePoint server.
4. Upgrade the Web Part, using either [Windows PowerShell®](#) commands or the [STSADM](#) tool as described below.
5. Deactivate and then [activate the Lightning Conductor Web Part site collection feature](#).

Note You can deactivate and activate the LightningConductorWebPart feature on all site collections, where the feature is currently active using Windows PowerShell. See below.

Always test Windows PowerShell and STSADM commands in a test scenario, before using in live scenarios. Do not copy and paste commands from this page, as hidden characters may be included which will cause the commands to fail in your environment.

Using Windows PowerShell commands

To upgrade the Lightning Conductor Web Part using Windows PowerShell commands, use the following steps. The *Upgrade-SPSolution* command resets the Web server, and therefore you will temporarily see *Error 503 service unavailable* when displaying a page in the browser, therefore you should schedule to complete this activity out of hours:

1. Open the [SharePoint 2013 Management Shell](#).
2. Type on one line, the Windows PowerShell command similar to:

```
Update-SPSolution -Identity "LightningConductor2013WebPart.wsp"
```

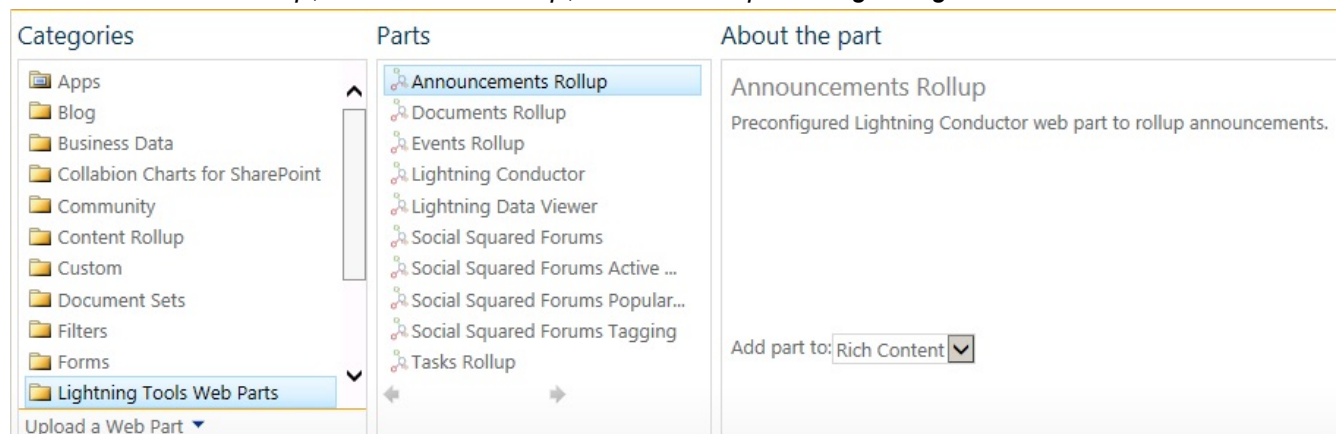
`-LiteralPath "c:\tools\LightningConductor2013WebPart.wsp" -GacDeployment`
replacing `c:\tools` with the location where you stored the wsp file.

3. Display any SharePoint site in the browser. If you see *Error 503 service unavailable*, wait and then try again.
4. You can now tell each site collection owner who uses the Lightning Conductor Web Part to deactivate and then [activate the LightningConductorWebPart site collection feature, using the browser](#), or you can use Windows PowerShell commands similar to the following commands to reactivate the feature in all sitecollections in a Web Application, where the feature is already activated.

```
$lcwp = Get-SPFeature LightningConductorWebPart;
$s = (Get-SPWebApplicaition http://intranet.lt.com).sites;
$s | foreach {
    if ($_.Features[$lcwp.id]) {
        "`nReactivating LCWP site collection feature on: " + $_.Url;
        Disable-SPFeature $lcwp -Url $_.Url -Force -Confirm:$false;
        Enable-SPFeature $lcwp -Url $_.Url;
        "`n";
    } else {
        "site collection where LCWP feature not activated: " + $_.Url;
    }
}
```

Replacing `http://intranet.lt.com` with the URL of your Web Application. This code also prints out all those site collections in the Web Application where the Lightning Conductor Web Part site collection feature is not activated.

5. Edit a page on a site collection where the LightningConductorWebPart feature has been re-activated, and check in the Web Part pane, in the *Lightning Tools Web Part* category, the Web Parts: *Announcements Rollup*, *Documents Rollup*, *Events Rollup* and *Lightning Conductor* are visible.



Using the STSADM tool:

To use STSADM commands to upgrade your Lightning Conductor Web Part, use commands similar to:

1. On the SharePoint server, open a command prompt and type:

```
STSADM.exe -o upgradesolution -f c:\tools\LightningConductor2013WebPart.wsp  
-name LightningConductor2013WebPart.wsp -allowgacdeployment -immediate  
replacing c:\tools with the location where you stored the wsp file.
```

2. Then type:

```
STSADM.exe -o execadmsvcjobs.
```

3. Deactivate and [activate the LightningConductorWebPart site collection feature](#) on site collections where it is used.

[Installing the Lightning Conductor 2013 Web Part →](#)

[— Activate the Lightning Conductor Web Part site collection feature](#)

[Configuring the Lightning Conductor Web Part Caching Engine →](#)

Configuring the Lightning Conductor Web Part Caching Engine

Each [Lightning Conductor Web Part](#) can be [configured](#) to use a caching mechanism that increases the performance of the Web Part. This is useful when the Lightning Conductor Web Part is aggregating content from a large number of lists and when you want to increase the speed the Web Part rolls up results and displays them in the user's browser. This minimizes the number of round trips from a [Microsoft® SharePoint® 2013](#) server to the SQL Server® content databases each time the Lightning Conductor Web Part is displayed on a page.

Enabling caching on a large number of Lightning Conductor Web Parts can result in memory issues on your SharePoint servers. You need to monitor and plan your LCWP cache settings, together with other SharePoint caching settings you may have configured. By default the Lightning Conductor Web Part is not configured to cache the results of the data source queries. Note the caching mechanism used by Web Part is it's own caching mechanism, that is, it is not, for example, using the SharePoint object cache mechanism. References to using, and monitoring SharePoint can be found at the end of this page.

The [Lightning Conductor Web Part](#) uses a caching engine instance. There is one predefined caching engine instance, **Global Engine**, which cannot be deleted. Caching engine instances can be configured and additional caching engine instances can be created.

Each time a Lightning Conductor Web Part (LCWP) is added to a page you can [configure](#) it to use a LCWP caching engine. A SharePoint server administrator can configure or create LCWP caching engine using the following steps:

1. In the browser, open Microsoft SharePoint 2013 Central Administration web site. On the Quick Launch click **System Settings**, and then under **Farm Management**, click **Configure Lightning Conductor caching engine**.

The **Lightning Conductor Caching Engine Settings** page is displayed, which by default displays the settings for the **Global Engine** caching instance.

2. If you want to configure a different caching engine instance or create a new caching engine instance, select the down arrow to the right of **Global Engine** and select **Change Engine Instance**

LightningTools Caching Engine Settings

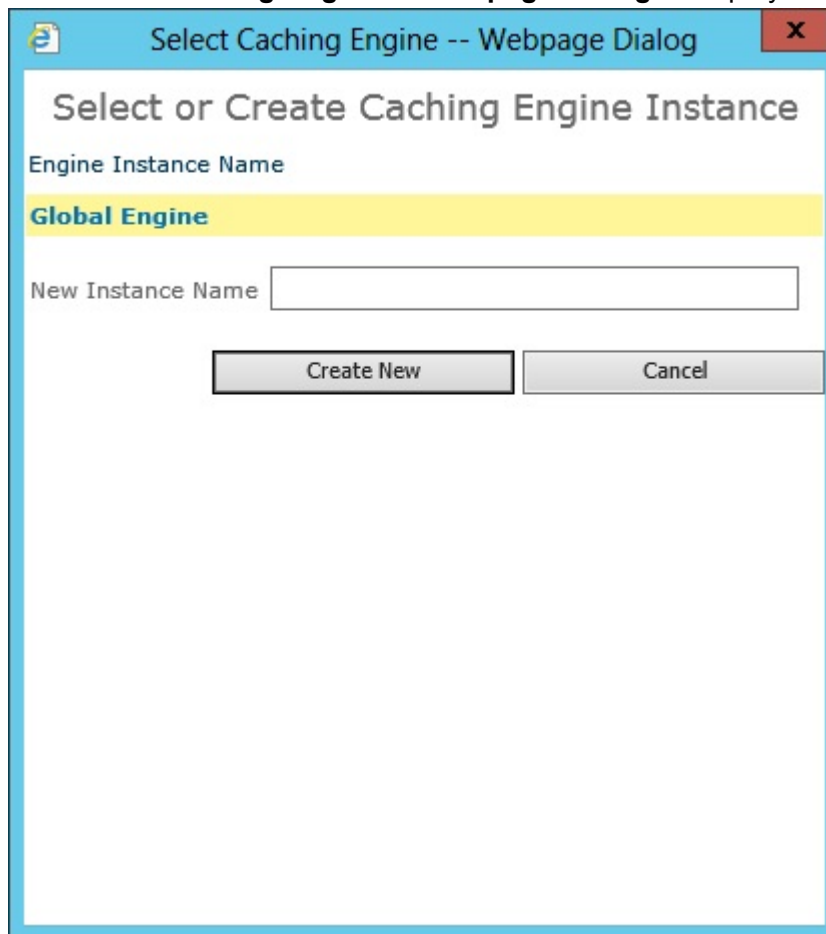
Choose Engine

Choose LightningTools caching engine instance, settings of which you want to modify.

Engine Instance: **Global Engine** ▼

Change Engine Instance

The **Select Caching Engine — Webpage Dialog** is displayed.



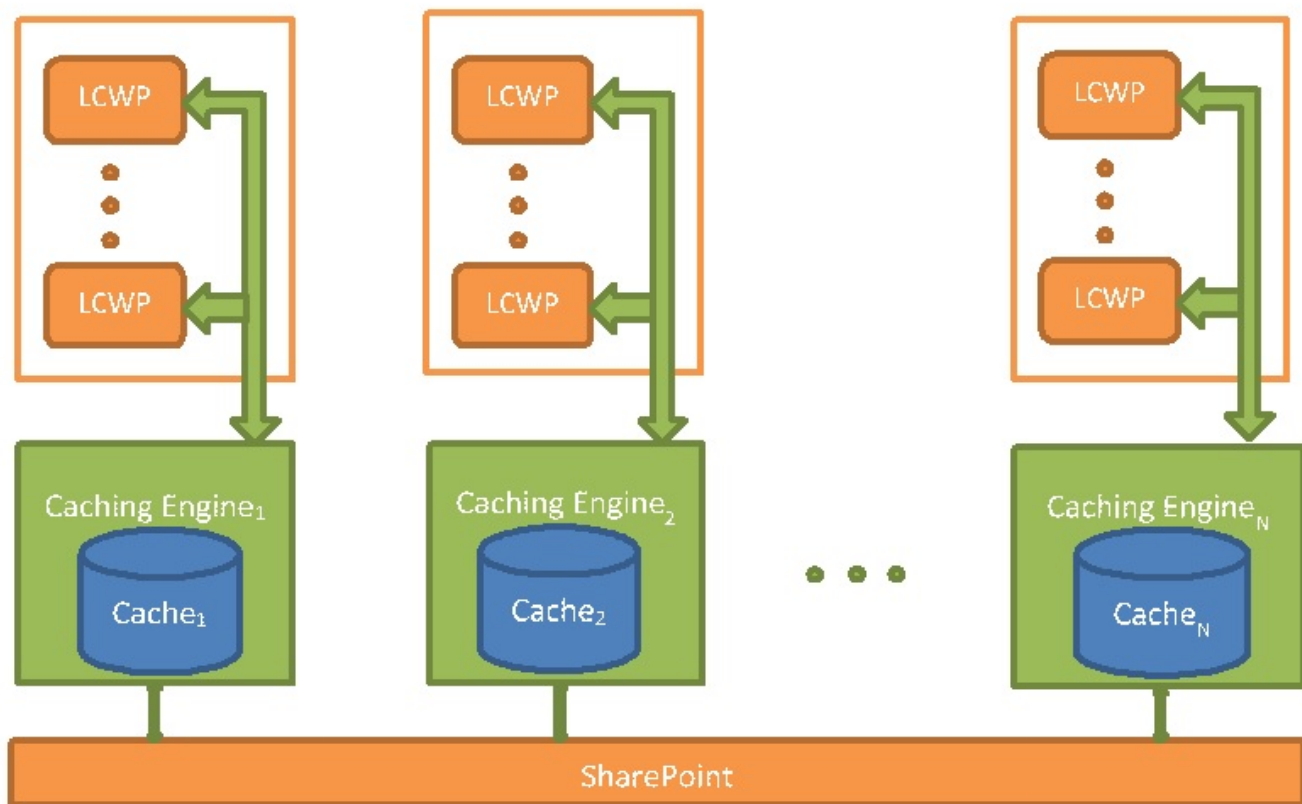
3. Click the caching engine instance you wish to configure or in the **New Instance Name** text box, type the name of the new instance and then click **Create New**.
4. Amend the caching settings for each instance as described later on this page.
5. At the bottom of the **LightningTools Caching Engine Settings** page, click **Save**.



To clear the cache, at the bottom of the **LightningTools Caching Engine Settings** page, click **Invalidate**. To delete the caching engine instance click **Delete**. This option is not displayed for **Global Engine**.

Caching Engine Instances

You only need additional instances of the LCWP caching engine, if the caching properties required by the Lightning Conductor Web Part are different. The properties of the LCWP caching engine are described in the following sections. Theoretically each LCWP can use their own instance of the LCWP caching engine or you can configure several LCWP to use a specific instance of a LCWP caching engine as shown in the following diagram.



For example, you may have added the LCWP multiple time on the same page or on different pages. Some of the Web Parts may be using the caching engine, some of the Web Part will not. Those Web Parts that are using caching, may require the caching engine to handle checked out items, while other part Web Parts do not. In this scenario the only solution is to have two caching engines. The first caching engine should have the **Handle Checked Out Items** check box selected and the second checking engine, should not have the check box selected. The first set of Web Parts should use the first caching engine and second set of Web Parts should use second caching engine. In other words, several instances of the caching engine are required when some of the LCWP require different caching engine settings than other LCWPs.

Query Running Context

By default when caching is enabled on a SharePoint 2013 Lightning Conductor Web Part the data source query is run twice in the context of [Web Application super user and super reader accounts](#). Metadata about SharePoint Server objects, such as, SPWeb, SPSite, SPList, etc., are saved in the object cache using these accounts, and then the Access Control List (ACL) of the current user is used to display data from the cache that they have permissions to – security trimmed.

Query Running Context

Specify whether SharePoint queries must be run under current logged in user context or under super admin and super reader accounts.

☐ Use current logged in user context

By selecting **Use current logged in user context** check box, the current user account is used by the data source query and the results of the query are saved in the cache. Each user will have their own copy of the resulting data in cache, which has resource implications. When queries are run in the context of current user context, the settings in the **Item Limit Multiplier** and **Handle Checked Out Items** sections are not applicable and will be greyed out.

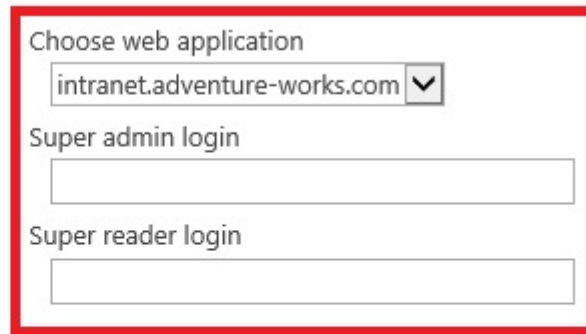
Web Application Accounts

When the **Use current logged in user context** check box is not selected then the data source query uses the [Web Application super user and super reader accounts](#), also known as the Portal Super User and Portal Super Reader accounts. It is assumed that the super user account sees all versions of all items, including draft versions, and the super reader account sees only published versions of all items, when the list is configured not to allow readers to see draft versions. The permissions for accounts that you intend to use for the super user and super reader accounts can be configured for each Web Application, using the SharePoint 2013 Central Administration web site or Windows PowerShell, as described in the TechNet article; [Configure object cache user accounts in SharePoint Server 2013](#).

By default, that is, when no value is provided in the **Super admin login** and the **Super reader login** text boxes, the caching engine instance will use the site's System Account as the super user account and "NT AUTHORITY\LOCAL SERVICE" as the super reader account. You can provide accounts for the super user and super reader accounts for each web application, and Microsoft recommends that the account used for the super user and super user accounts are separate accounts.

Web Application Accounts

Specify super admin and super reader accounts for each web application, which must be used for retrieving items from appropriate web application. Super admin account must have full access to all sites of that web application, while super reader account must have read only access. If no super admin account is specified, then "SHAREPOINT\system" account will be used. If no super reader account is specified, then "NT AUTHORITY\LOCAL SERVICE" will be used.



Choose web application
intranet.adventure-works.com ▼

Super admin login

Super reader login

For the caching engine to work correctly no items should be checked out to the super user and super reader accounts, as when a query that includes these items is made, the checked out version of the item is returned instead of the latest published version. As the site's System Account is used for other tasks, some items do get checked out to the System Account, therefore Microsoft recommends that you should provide accounts for the super user and super reader accounts and that these two accounts should never be used to login to the site.

For web applications that use [claim based authentication](#), account names must be provided in required form, for example, the account name of windows user DOMAIN\user must be i:0#.w|DOMAIN\user

Item Limit Multiplier

On the [Data Source tab](#) for the Lightning Conductor Web Part you may have specified many different data sources and therefore the Web Part may need to execute a SharePoint query against many site collections and sites during the rollup process. In the **Item Limit Multiplier** text box, type an integer value, the default is 3, that is used to limit the content return for each SharePoint data source query. The value in this text box, is only applicable when you type a value for the Lightning Conductor Web Part in the [The Limit Amount of Items Return To](#) text box in the **Miscellaneous** section on the [Data Source tab](#).

Item Limit Multiplier

Specify multiplier of item limit in queries. E.g. when multiplier is 3 and item limit of some query is 1000, then item limit will be made 3000 when running queries in context of super admin or super reader account.



Multiplier

For each SharePoint query, the LCWP caching engine limits the number of items returned to the number generated by multiplying the [Limit Amount of Items Return to](#) value, to the **Item Limit Multiplier** value. This allows the caching engine instance to executes queries in context of super admin account and in context of super reader account, thereby allowing the Web Part to retrieve the necessary items from the cache for each type of user when needed.

Handle Checked Out Items

By default, when **Handle Checked Out Items** check box is not selected the latest published items are returned from the data source query, even for users, who have checked out the items. When the **Handle Checked Out Items** check box is selected, the query retrieves the value of checked out items.

Handle Checked Out Items

Specify whether caching engine must take into account checked out items, i.e. users who has been checked out items, must see those items with changes, which has been done after checking out.

☐ Handle checked out items

Use the SharePoint Change Log

Select the **Use Log** check box when you want the caching engine instance to detect changes to SharePoint object by using the [SharePoint change log](#). The default is not to use the change log.

Use SPChange Log

Specify whether SharePoint objects change log must be used for detecting changes or not.

☐ Use log

Resource Disposing Strategy

Use the two check boxes in this section to specify when the caching engine instance disposes of resources allocated during execution of data source queries:

- SPSiteDataQuery
- SPQuery

The default is to reused the resources allocated during the query, that is, the resources are not

released immediately.

Resource Disposing Strategy

Specify whether allocated SharePoint resources (during execution of SPQuery or SPSiteDataQuery) must be disposed immediately or they could be reused.

- ☐ Dispose resources allocated during execution of SPSiteDataQuery immediately
- ☐ Dispose resources allocated during execution of SPQuery immediately

Memory Limit

In the **Memory Limit** text box, type the amount of memory, in megabytes, which can be allocated by caching engine instance for storing cached objects. The default is to specify no value, that is, there is no memory limit for caching engine instance. When memory limit is exceeded, the caching engine instance will remove some cached objects from the cache in xxx order to free part of allocated memory.

Memory Limit

Specify memory limit, which can be used by caching engine instance. Empty value means no memory limit.

Memory limit (MB)

References

- [Plan for caching and performance in SharePoint Server 2013 →](#)
- [Configure cache settings for a web application in SharePoint Server 2013 →](#)
- [Configure object cache user accounts in SharePoint Server 2013 →](#)
- [Monitor cache performance in SharePoint 2013 →](#)

Testing the installation

Use the following steps to test your installation:

1. In the Web applications where you have [deployed](#) the [Lightning Conductor Web Part](#), choose a site where you will create a page to test the Web Part.
2. In the browser, open the top level site of the site collection where your site exists and [activate the Lightning Conductor Web Part site collection feature](#).
3. Navigate to the site where you are going to test the Web Part.
4. [Create a new page](#).
5. [Add the Web Part to the page](#).
6. [Configure the Web Part](#) and stop editing the page.
7. Review the page and check that the Web Part is displayed as expected.

[Troubleshooting →](#)

Creating pages

A website is a collection of webpages. The types of pages that you can create depend on the site that you have created. Most users will be familiar with [Team sites](#) within a Microsoft® SharePoint® 2013 installation. When you create a new Team site, SharePoint creates a wiki page library, named Site Pages, where webpages are stored and new pages are created. Two types of webpages can be created in the Site Pages library:

- [wiki pages](#). These are the default pages when a site is created from the Team site template. Wiki pages are easy to edit and are used when users need to add static text, images, tables and a small number of [Web Parts](#).
- Web Part pages. These pages can only contain [App Parts](#) and [Web Parts](#), and are a popular choice for creating interactive dashboards or pages that aggregate information from several content sources.

Web Content Management (WCM) sites, also known as publishing sites are used for public facing sites or for company portals. When you create a WCM page, known as a publishing page, they are created from page layouts. Publishing pages may be able to contain Web Parts and SharePoint App Parts; however, it depends on the page layout you have chosen for the publishing page.

[Creating a wiki page →](#)


[Creating a Web Part page →](#)

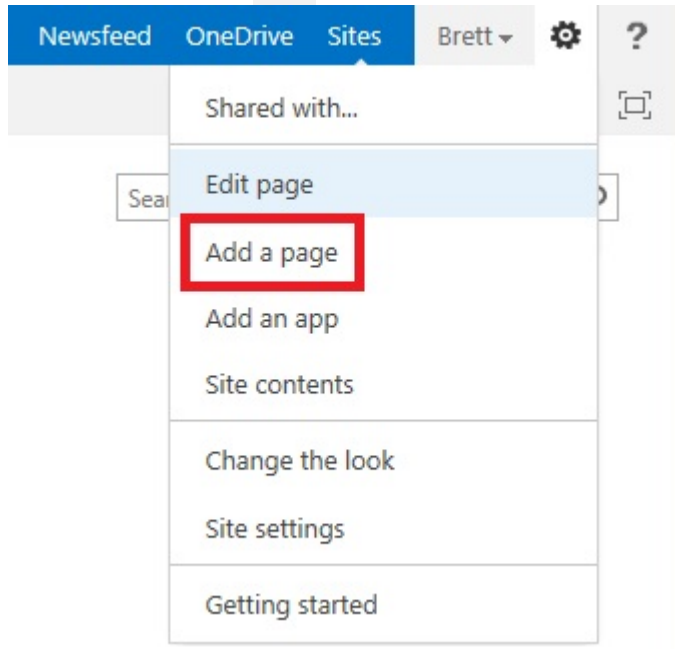
[Keyboard shortcuts for common tasks on SharePoint pages →](#)

[Create and manage pages in a publishing site →](#)

Creating a wiki page

To create a wiki page on a site created from the Team site template, complete the following steps:

1. Navigate to the site where you wish to create a wiki page.
2. Click the **Settings**  and then click **Add a page**.



3. Type the name of your page and then click **Create**.

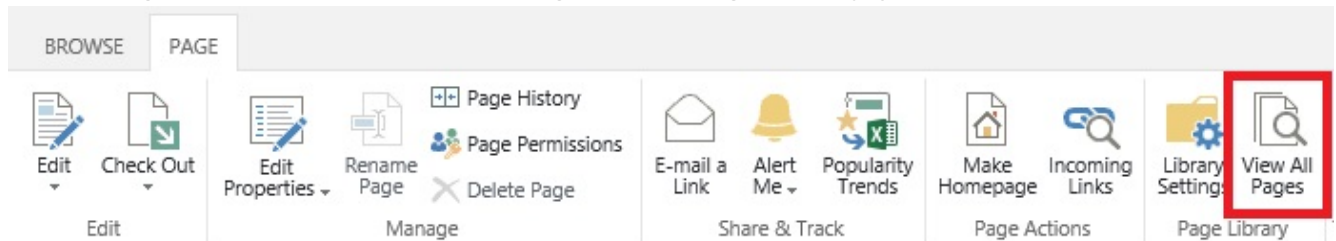
[Adding Web Parts to a page →](#)

[Change the layout of a wiki page →](#)

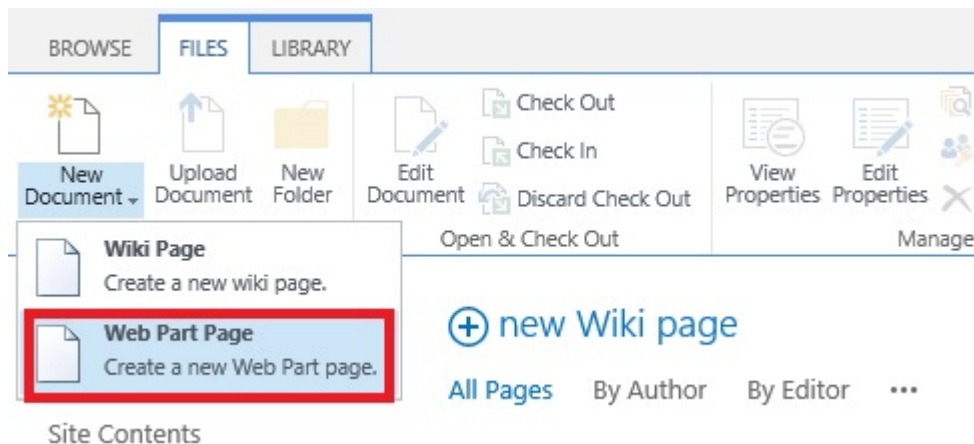
Creating a Web Part page

To create a Web Part page on a [Microsoft® SharePoint® 2013](#) Team site,

1. Navigate to the site where you wish to create a Web Part page.
2. On the **Page** ribbon tab, click **View All Pages** in the **Page Library** group.



3. On the **Files** ribbon tab, click the **New Document** down arrow and then click **Web Part Page**.



4. In the **Name** text box, type the name of your page and in the **Choose a Layout Template** list, select the layout you require.

Site Contents ▸ New Web Part Page ⓘ

Name

Type a file name for your Web Part Page. The file name appears in headings and links throughout the site.

Name:

 .aspx

☐ Overwrite if file already exists?

Layout

Select a layout template to arrange Web Parts in zones on the page. Multiple Web Parts can be added to each zone. Specific zones allow Web Parts to be stacked in a horizontal or vertical direction, which is illustrated by differently colored Web Parts. If you do not add a Web Part to a zone, the zone collapses (unless it has a fixed width) and the other zones expand to fill unused space when you browse the Web Part Page.



Choose a Layout Template:

Header, Footer, 3 Columns

Full Page, Vertical

Header, Left Column, Body

Header, Right Column, Body

Header, Footer, 2 Columns, 4 Rows

Header, Footer, 4 Columns, Top Row

Left Column, Header, Footer, Top Row, 3 Columns

Right Column, Header, Footer, Top Row, 3 Columns

Save Location

Select the document library where you want the Web Part Page to be saved.

Document Library

Site Pages ▼

Create

Cancel

5. Click **Create**.

[Adding Web Parts to a page →](#)

[Keyboard shortcuts for Web Part Pages →](#)

Using the Lightning Conductor 2013 Web Part

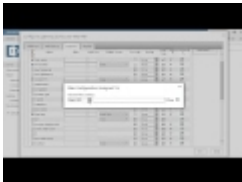
The [Lightning Conductor Web Part](#) (LCWP) for [Microsoft® SharePoint® 2013](#), allows you to easily build a cross [site collection](#) or cross [web application](#) rollup of list items or files, build a view, apply formatting and conditional formatting to your aggregated content without the need to build complicated view templates or create XSLT. The LCWP comes with a number LCWP preconfigured Web Parts to rollup Announcements, Documents, Events and Tasks.

The LCWP provides you with an alternative to the Content Search Web Part ([CSWP](#)) and Content Query Web Part ([CQWP](#)), which both require the use of [SharePoint Server 2013 Enterprise licences](#).

The LCWP can be used on any version of a [SharePoint](#) 2013 on-premises installation, that is, the Web Part can be used on pages in a [SharePoint Foundation 2013](#) on-premises installation, and can be used and seen on pages where users are assigned either the standard or enterprise SharePoint Server 2013 licenses.

[Lightning Tools](#) has an [Office 365® Apps](#) version of the LCWP, details of which can be found at <http://lightningtools.com/lightning-conductor-app/>.

For an overview of the [Lightning Conductor Web Part](#) view the following video:



Complete the following tasks to configure the Lightning Conductor Web Part:

1. [Add a Web Part to the page](#).
2. If you wish to use multiple views within your Web Part, enable [multiple views](#) then [Create Views](#) as required.
3. [Configure the Lightning Conductor Web Part](#).

The Lightning Conductor Web Part must be [installed](#), and the [Lightning Conductor Web Part site collection feature](#) must be activated before you can use the Lightning Conductor Web Part on a SharePoint page.

[Request a trial version →](#)

Adding Web Parts to a page

To add a [Lightning Conductor Web Part](#) to a Microsoft® SharePoint® 2013 page, use one of the following two procedures, depending on your page type.

- Add a Web Part to a [wiki page](#).
- Add a Web Part to a [Web Part page](#).

Troubleshooting: If the **Lightning Tools** category or the **Lightning Conductor Web Part** does not appear in the Web Part pane, the [Lightning Conductor Web Part site collection feature](#) has not been activated. Contact your site collection administrator to activate the site collection feature.

[Using the Lightning Conductor Web Part](#)

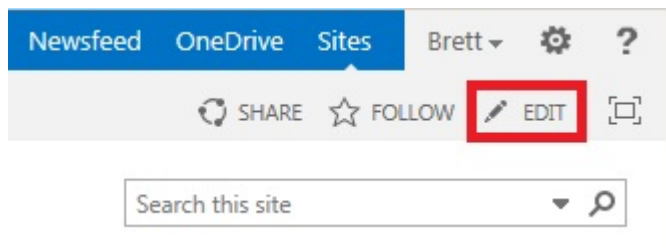
[Move, Minimize, or delete a Web Part from a page →](#)

[Troubleshooting using the Web Part Maintenance Page →](#)

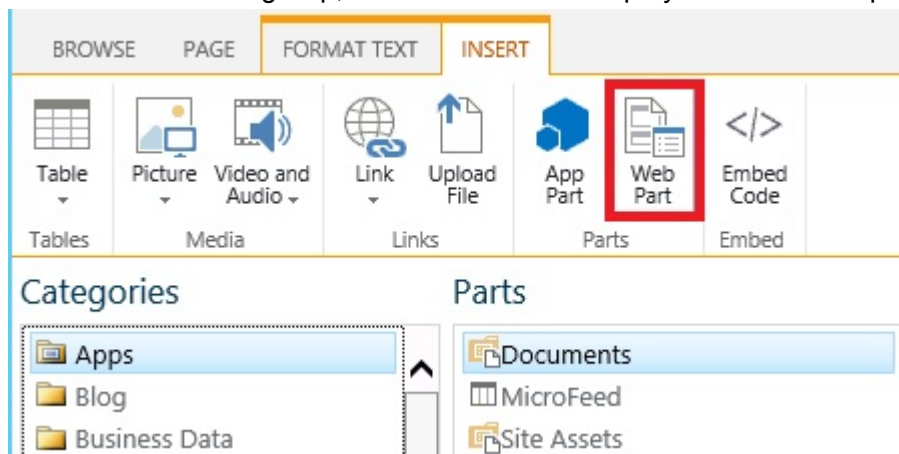
Add a Web Part to a wiki page

To add a Web Part to a wiki page, use the following steps:

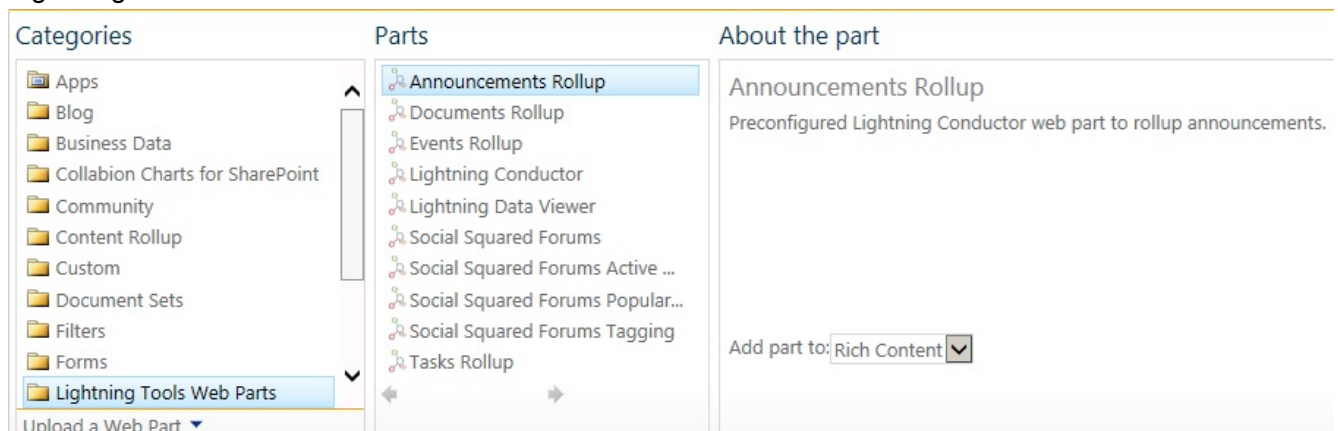
1. In the browser, navigate to the wiki page where you want to add the Lightning Conductor Web Part.
2. Click **Edit**.



3. Click to place the cursor where you want the Web Part to appear and then click the **Insert** ribbon tab.
4. In the **Parts** ribbon group, click **Web Part** to display the **Web Part** pane.



5. Under **Categories**, click **Lightning Tools Web Parts** and then under **Parts**, click one of the Lightning Conductor Web Parts, such as, **Lightning Conductor**. The other Lightning Conductor Web Parts are: Announcements Rollup, Documents Rollup, Events Rollup and Tasks Rollup, which are preconfigured Lightning Conductor Web Parts.



6. Click **Add** to add the Web Part to the page.
7. [Configure the Lightning Conductor Web Part.](#)
8. Click **Save**.



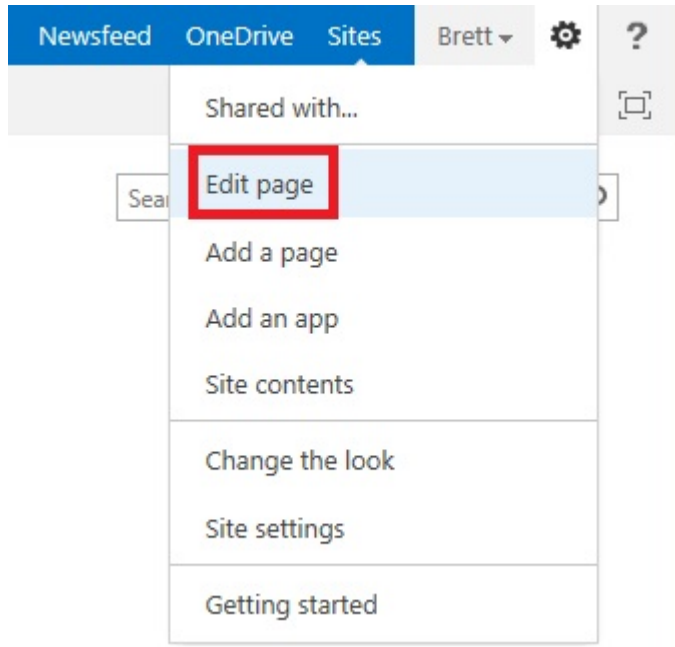
[Using the Lightning Conductor Web Part →](#)

Troubleshooting: If the **Lightning Tools** category or the **Lightning Conductor Web Part** does not appear in the Web Part pane, the [Lightning Conductor Web Part site collection feature](#) has not been activated. Contact your site collection administrator to activate the site collection feature.

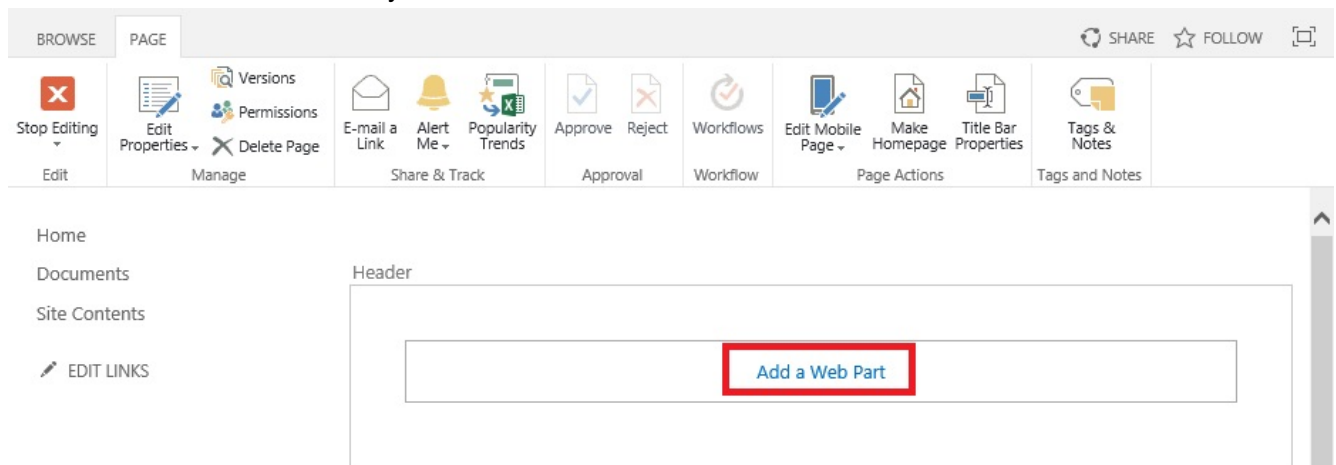
Add a Web Part to a Web Part page

To add a Web Part to a Web Part page, using the following steps:

1. In the browser, navigate to the Web Part page where you want to add the Lightning Conductor Web Part.
2. Click the **Settings** gear icon, and then click **Edit page**.

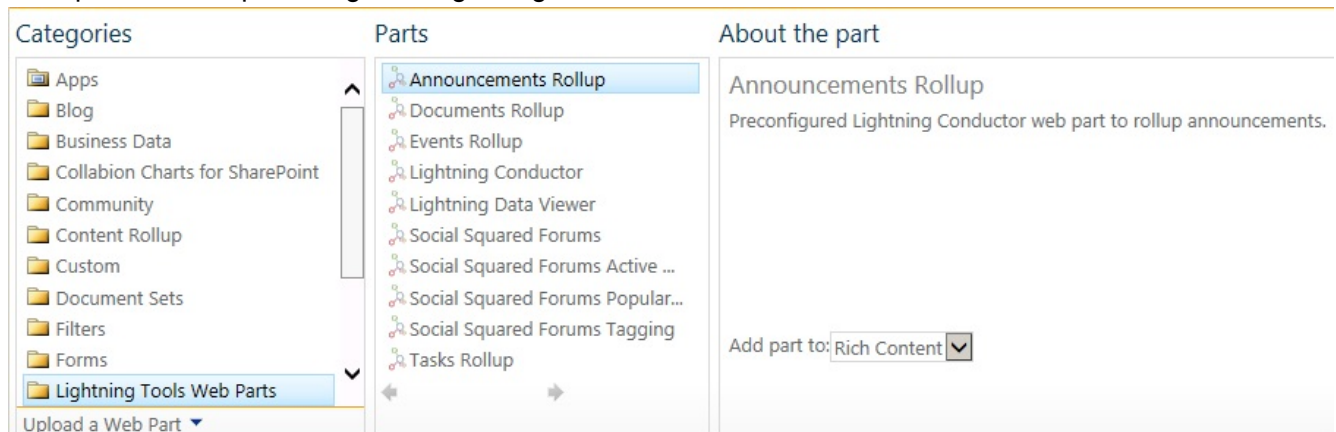


3. In the Web Part zone, where you want to add the Web Part click **Add a Web Part**.



4. In the Web Parts pane, under **Categories**, click **Lightning Tools Web Parts** and then under **Parts**, click one of the Lightning Conductor Web Parts, such as, **Lightning Conductor**. The other Lightning Conductor Web Parts are: Announcements Rollup, Documents Rollup, Events Rollup and Tasks

Rollup, which are preconfigured Lightning Conductor Web Parts.



5. Click **Add** to add the Web Part to the page.
6. [Configure the Lightning Conductor Web Part.](#)
7. On the **Page** tab, click **Stop Editing**.

Troubleshooting: If the **Lightning Tools** category or the **Lightning Conductor Web Part** does not appear in the Web Part pane, the [Lightning Conductor Web Part site collection feature](#) has not been activated. Contact your site collection administrator to activate the site collection feature.

[Using the Lightning Conductor Web Part →](#)

[Keyboard shortcuts for Web Part Pages →](#)

Configuring the Lightning Conductor Web Part

To configure the [Lightning Conductor Web Part](#) for Microsoft® SharePoint® 2013, use the following steps:

1. When the Web Part is not configured for [Multiple views](#), from the Web Part menu click **Configure Lightning Conductor**.
2. Otherwise, click the arrow to the right of **View** and select the view you wish to configure.



Then from the Web Part menu, click **Configure view**.

To see examples of the configuration of a Lightning Conductor Web Part review the configuration of the Announcements Rollup, Documents Rollup, Events Rollup and Tasks Rollup Lightning Tools Web Parts.

The **Configure Lightning Conductor Web Part** dialog is displayed, which consists of four tabs:

1. [Web Part](#)
2. [Data Source](#)
3. [Columns](#)
4. [Display](#)

Once you have configured the Web Part, chosen the content to aggregate and how to display the content, at the bottom of the **Configure Lightning Conductor Web Part** dialog, click **Save**.

The minimum configuration details you must provide are:

- On the [Data Source tab](#):
 - In the [Rollup Source](#) section, select at least one site or list or library.

- In the [List/Item Types](#) section, select a list type.
- On the [Columns tab](#), select at least one [column](#).

You can also configure [programmatically](#) a Lightning Conductor Web Part.

Using Multiple Views

You can configure the [Lightning Conductor Web Part](#) to display one view of the data or multiple views. Multiple Views allow you to display content from different lists or the same list within the same instance of the Web Part, so that you do not have to add multiple instances of the Web Part on the same page. You can also use Web Part connections to [dynamically select a view](#).

If you wish to take advantage of multiple views within your Lightning Conductor Web Part, you must first [enable multiple views](#).

By default one view is created when you add the Lightning Conductor Web Part to your page. You can then subsequently [create additional views](#).

When you enable multiple views on the Lightning Conductor Web Part the following changes are made to the links on the Web Part menu:

Links removed:

- Configure Lightning Conductor

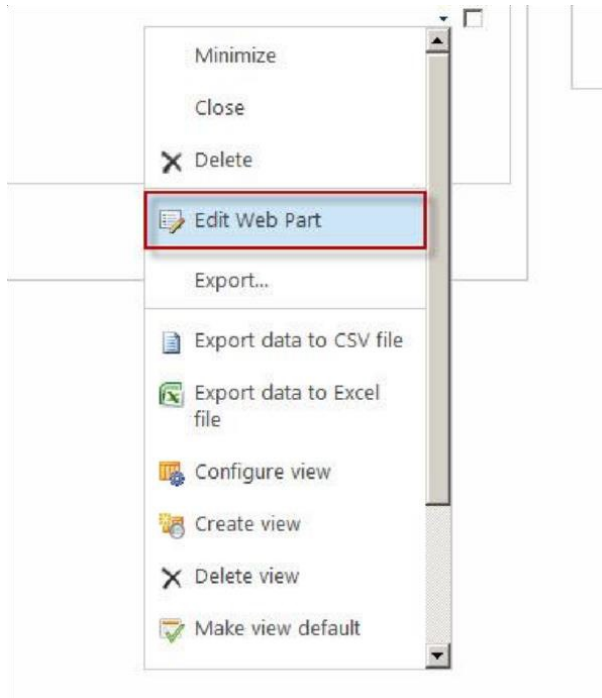
Links added:

- [Configure view](#)
- [Create view](#)
- Delete view
- Make view default

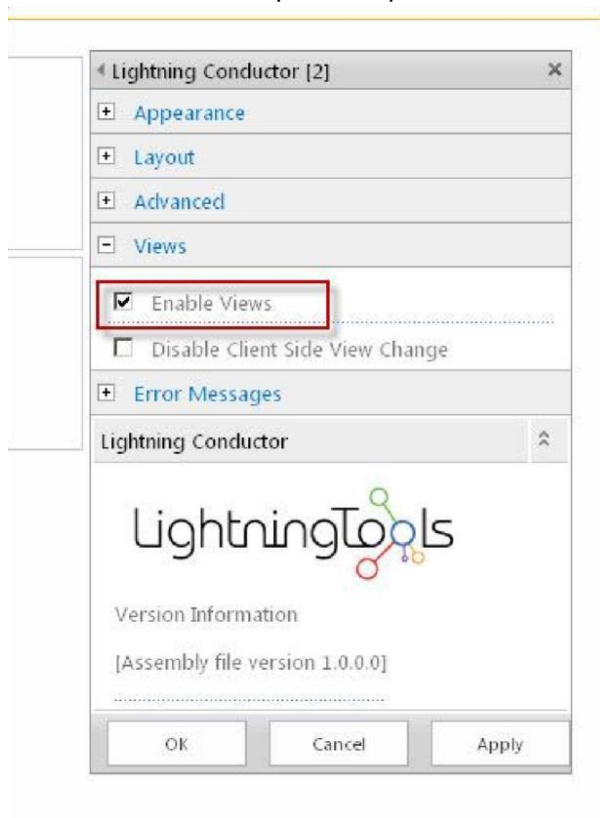
Enable Views

To enable [multiple views](#), use the following steps:

1. From the Web Part menu of the Lightning Conductor Web Part, click **Edit Web Part**.



2. In the Web Part tool pane, expand the **Views** section and select **Enable Views**.



3. At the bottom of the Web Part tool pane, click **OK**.

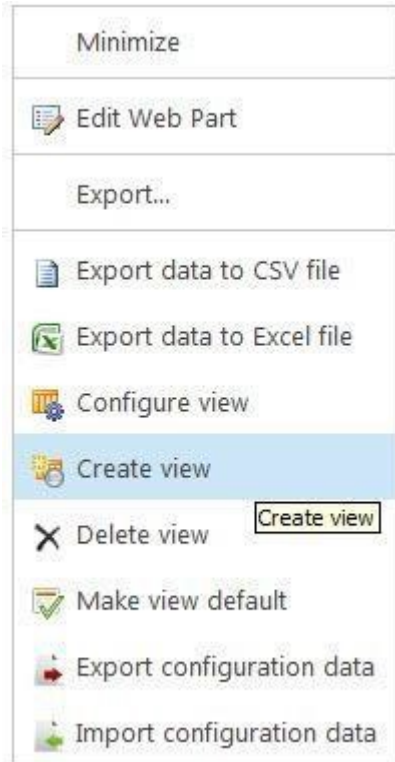
Select the **Disable Client Side View Change** check box to remove the dropdown Views menu on the Lightning Conductor Web Part. This prevents users from changing from either the default view, or the view which is selected when using a filter Web Part connection.

[Multiple Views →](#)

Create a View

To create a view, use the following steps:

1. From the Web Part menu of the Lightning Conductor Web Part, click **Create view**.



Troubleshooting: If you cannot see the **Create view** on the Web Part menu, the [Enable View](#) check box has not been selected in the **Views** section in Web Part tool pane. Ensure that you have click **OK** or **Apply** at the bottom of the Web Part tool pane once you have selected the check box.

[Multiple Views →](#)

Configure View

Use the following steps to configure a view.

1. From the Web Part menu, click **Configure view**.
2. The [Configure Lightning Conductor Web Part](#) dialog is displayed.

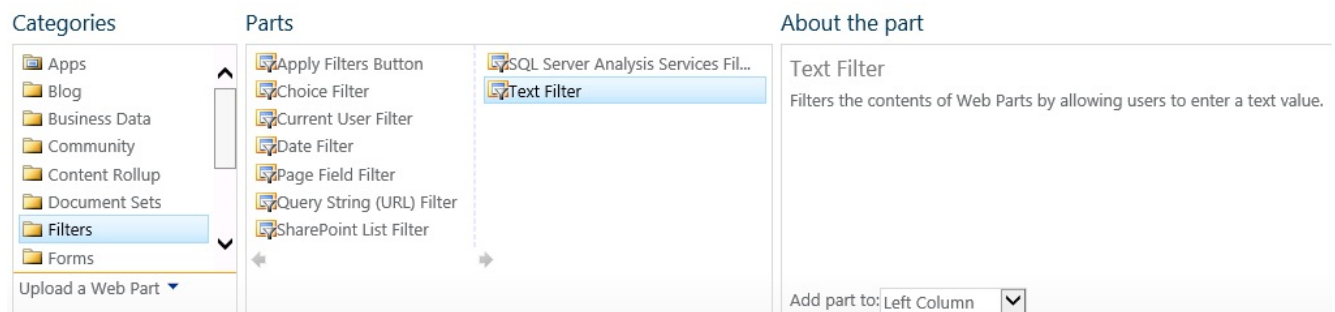
Troubleshooting: If you cannot see the **Configure view** on the Web Part menu, the [Enable View](#) check box has not been selected in the **Views** section in Web Part tool pane. Ensure that you have click **OK** or **Apply** at the bottom of the Web Part tool pane once you have selected the check box.

[Multiple Views →](#)

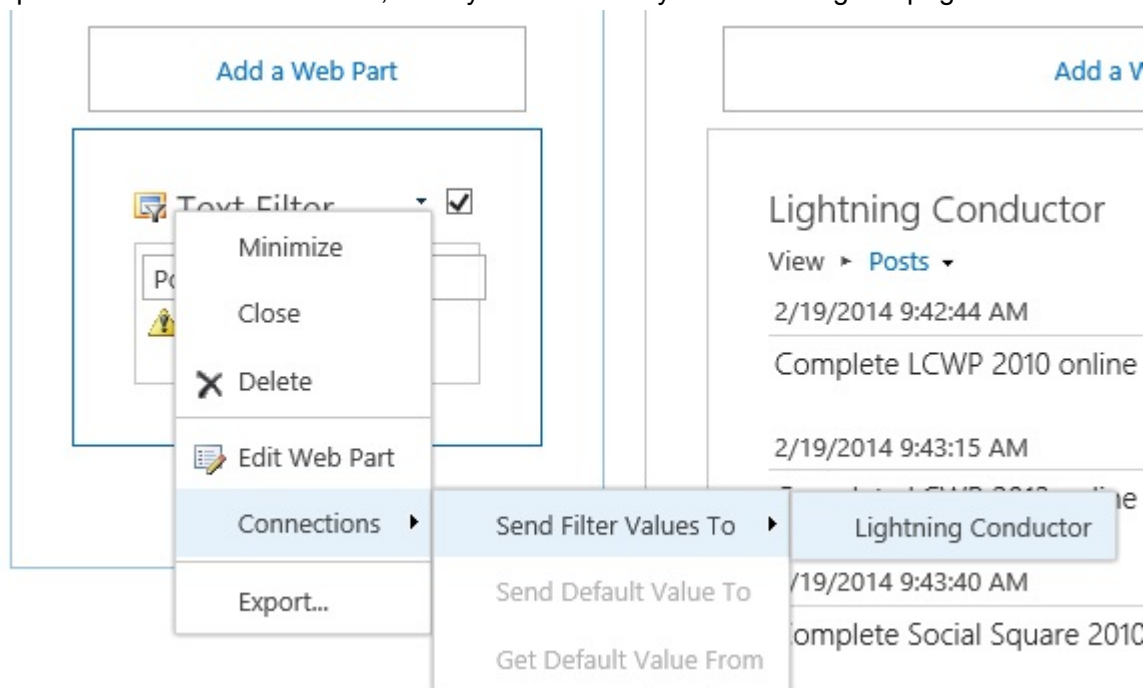
Dynamically selecting a view

When you have created [multiple views](#) for a Lightning Conductor Web Part, you can then connect another Web Part to the Lightning Conductor Web Part. When a user selects an item in the other Web Part, the view in the Lightning Conductor Web Part changes. Use the following steps to create a Web Part connection solution between the Filter Web Part and the Lightning Conductor Web Part.

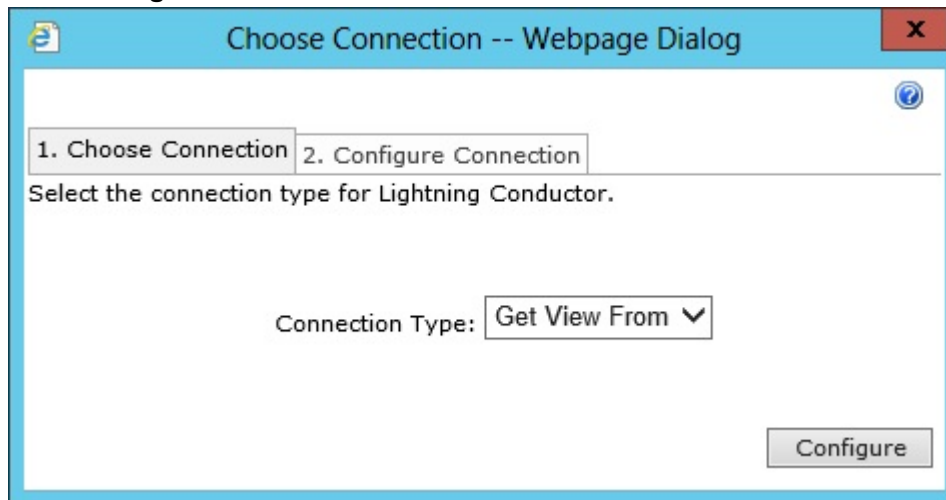
1. [Create a Web Part page](#).
2. “Add”:#add-a-web-part-to-a-web-part-page a filter Web Part, such as, the **Text Box Filter Web Part**.



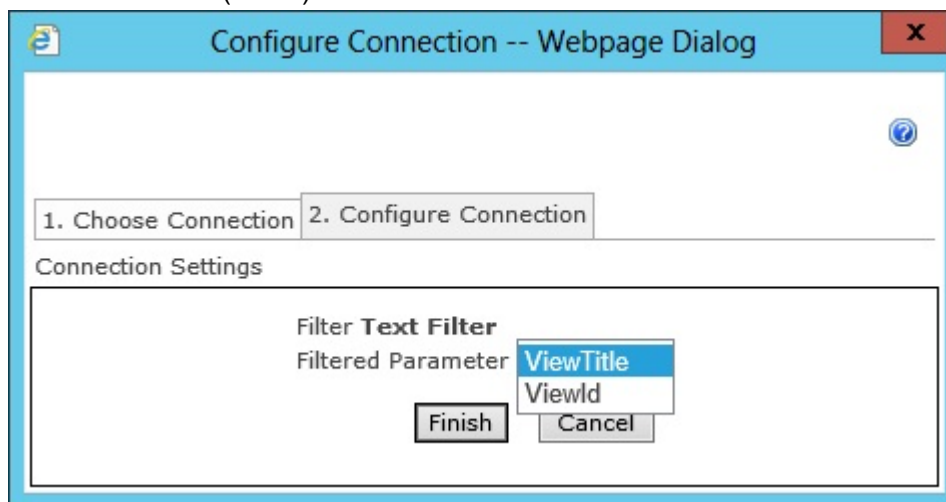
3. “Add”:#add-a-web-part-to-a-web-part-page a Lightning Conductor Web Part to the page, [enable views](#), [create multiple views](#) and [configure the views](#).
4. From the Web Part menu of the filter Web Part, select **Connections**, select **Send Filter Values To** and then select the Lightning Conductor Web Part that you want to filter. **Note:** The **Connections** option on the Web Part menu, is only visible when you are editing the page.



- On the **Choose Connections** dialog box, select **Get View From**, if not already selected and then click **Configure**.



- Select **View Title** or **View ID** depending on whether you are passing the name of the view or the numerical value (index) of the view.



- Click **Finish**.
- Click **Stop Editing**.
- Users can now select the view in the Lightning Conductor Web Part, using the filter Web Part.

Text Filter

Posts

Lightning Conductor

View ▶ Posts ▼

2/19/2014 9:42:44 AM

Complete LCWP 2010 online documentation 🔍 📄

2/19/2014 9:43:15 AM

Complete LCWP 2013 online documentation 🔍 📄

References

[Connect a List View Web Part to another Web Part →](#)

SharePoint 2010 related references:

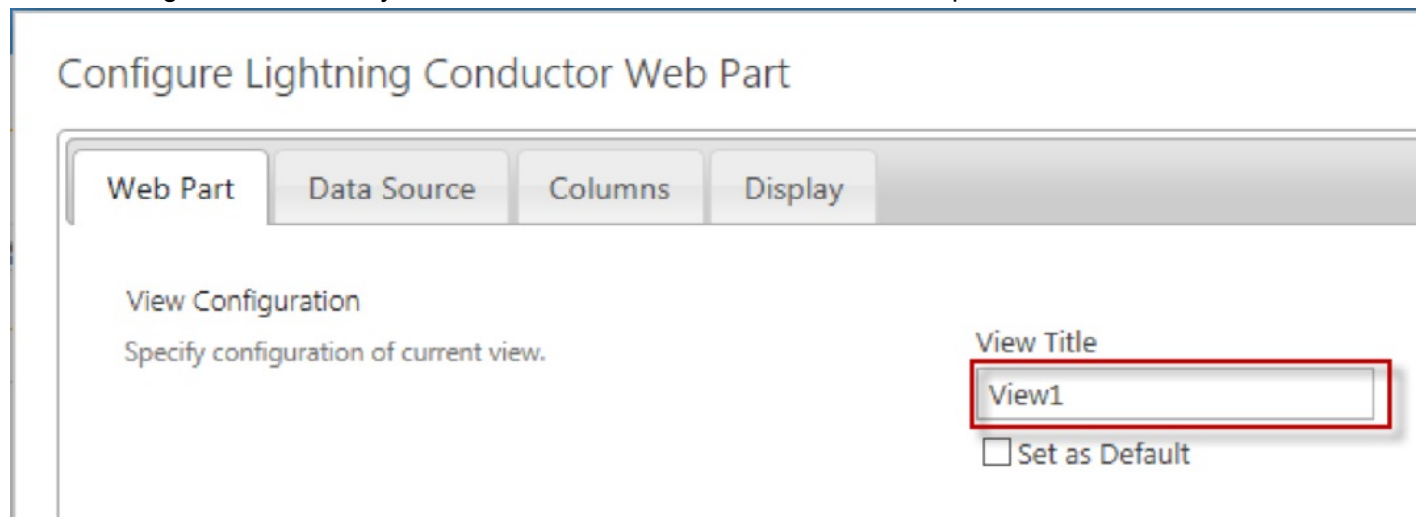
- [Connect data in Web Parts →](#)
- [Connecting Web Parts in SharePoint 2010 →](#)
- [Work with Filter Web Parts →](#)
- [Use a Text Filter Web Part →*](#)
- [Connect a Filter Web Part to a List View Web Part →](#)

Web Part tab

The **Web Part** tab is the first tab on the [Lightning Conductor Web Part](#) dialog and allows you to name the view, choose data source and display providers, and page loading options, as described below:

View Configuration

This section is only visible when [multiple views](#) is enabled. In the **View Title** text box, you can type the name of the view as it is shown in the Web Part. The default name of a view is **Viewn**, where *n* is a number that is auto generated when you create a view. View names must be unique.



The screenshot shows the 'Configure Lightning Conductor Web Part' dialog box. It has four tabs: 'Web Part', 'Data Source', 'Columns', and 'Display'. The 'Web Part' tab is selected. Below the tabs, the 'View Configuration' section is visible, with the instruction 'Specify configuration of current view.' To the right, there is a 'View Title' label above a text box containing 'View1'. Below the text box is a checkbox labeled 'Set as Default'.

Select the **Set as Default** checkbox when you want to use the view when the Web Part is first displayed.

Data Source Provider

There are two data source providers:

- **Object Model Rollup Engine Provider.** Use this provider for small queries when performing multiple filters.
- **SPSiteDataQuery Rollup Engine Provider.** Use this provider for large queries across multiple site collections.

Display Provider

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

- **SPGridView 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.
- [XSLT Style 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 Provider.](#) Build your own view using jQuery/JavaScript.

Data Refreshing Interval

Type in the text box the interval of time in seconds that the Lightning Conductor Web Part will fetch the items from the data source and refresh the page. A value of 0 or if you leave the text box empty, then the Web Part will only query the data source if the page is manually refreshed. When caching is enabled the value typed into this text box has no affect, that is, if caching is enabled at the refreshing interval the data is obtained from the cache and not from the data source.

Initial Loading

Select this check box to load the Web Part with item information independently of the page load. This is the default setting. When the check box is unselected the page loads once item information has been queried.

Statistical Information

Select this check box to display details at the top of the Web Part on how many items are being aggregated. This is useful when trying to identify performance issues.

[Configuring the Lightning Conductor Web Part →](#)

Using an XSLT view

The XSLT display provider allows you to configure the [Lightning Conductor Web Part](#) to display the aggregated content using [XSLT](#) (Extensible Stylesheet Language Transformations). Use this option if you have or you know someone with XSLT knowledge. The SPGridView 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 Style Display Provider**.
2. Select your data sources to aggregate 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**.

Configure Lightning Conductor Web Part

Web Part Data Source Columns Display

XSL Styles

XSL Styles Library Path

LightningTools Announcements
LightningTools Calendar
LightningTools Posts
LightningTools Sample XSL Style #1
LightningTools Sample XSL Style #2

Browse...

Data Format

Date Format

[Configuring the Lightning Conductor Web Part →](#)

Pre-defined XSLT Files

Five XSLT files are provided with the [Lightning Conductor Web Part](#) for Microsoft® SharePoint® 2013, 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 Calendar (Event) list.

Lightning Conductor



View ▸ Calendar ▾

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Prev	Next	Day	Week	Month	2013 ▾
May, 2013																	
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday											
28	29	30	1	2	3	4											
5	6	7	8	9	10	11											
					Release the Lightning Conductor 2013 Web Part												
12	13	14	15	16	17	18											
19	20	21	22	23	24	25											
26	27	28	29	30	31	1											

- **Announcements:** This XSLT file shows how to brand list items using formatting and colour options.



- **Posts:** Use to display Discussion Board items within a discussion view.




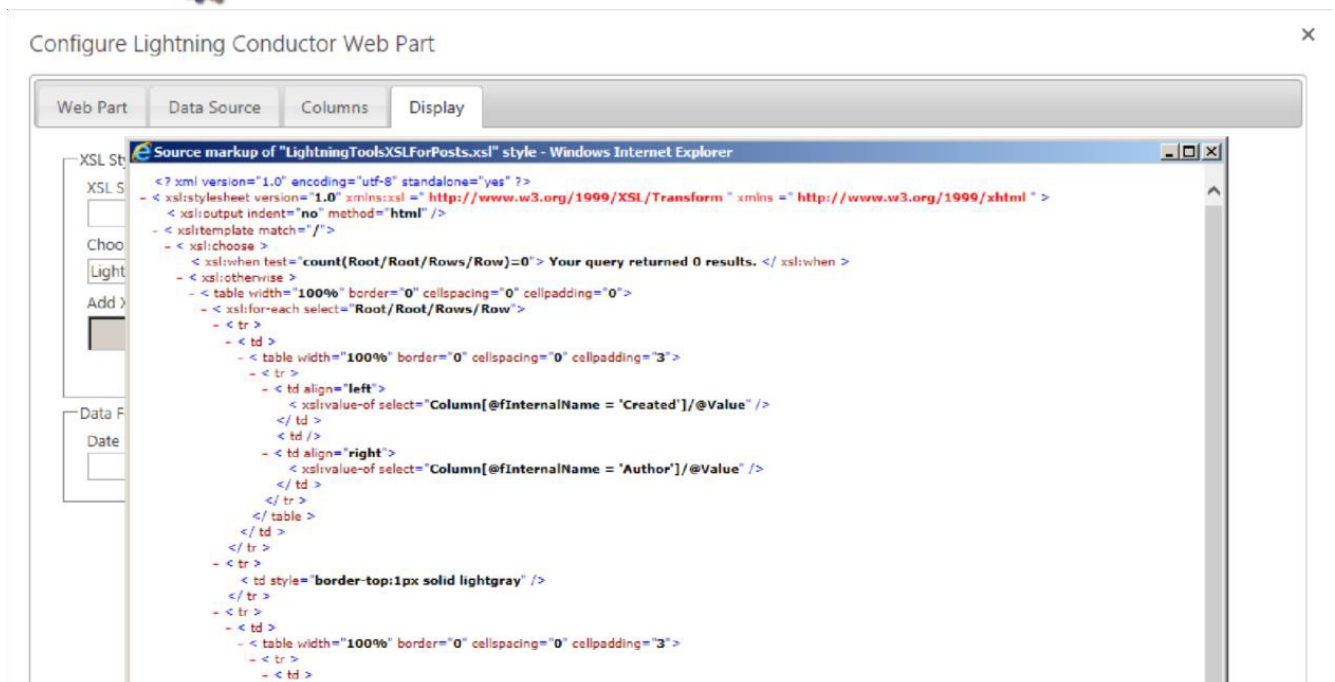
[Using an XSLT view →](#)


[Uploading custom XSLT views →](#)

Uploading Custom XSLT views

To create and upload you own custom XSLT view for the [Lightning Conductor Web Part](#) use the following steps:

1. Select the [Web Part tab](#) on the [Lightning Conductor Web Part](#) dialog.
2. In the **Display Provider** section, select **XSLT Style Display Provider**.
3. Select the [Data Source tab](#), and the in the [Rollup Source](#) section select a data source and any other configurations, for example, in the [List/Items Types](#) section select a List Type.
4. Select the [Display](#) tab, in the **XSL Styles** section, select one of the [predefined styles](#) and then click the cog icon  to view the XSLT source.



- Right click and then select **View Source**. Copy the contents 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.
- Click **Browse** and then click the green plus 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.
- Configure any column, sorting or filtering requirements, and then click **Complete**.

[Using an XSLT view →](#)

Using the JSON Display Provider

The [Lightning Conductor Web Part](#) for [Microsoft® SharePoint® 2013](#), provides several different ways of displaying the aggregated content from lists and libraries. You can select one of the display providers on the [Web Part](#) tab on **Configure Lightning Conductor Web Part** dialog:

- SPGridView Display Provider
- [XSL Style Display Provider](#)
- JSON Display Provider.

The JSON display provider allows you to configure the [Lightning Conductor Web Part](#) to display the aggregated content using client-side code. Use this option if you have a developer with knowledge of SharePoint, JavaScript and most likely JQuery. The SPGridView Display Provider is most suited to users who have no coding experience.

This page describes how to configure the Lightning Conductor Web Part (LCWP) to use the JSON Display Provider, and the JavaScript you need to include.

Procedure

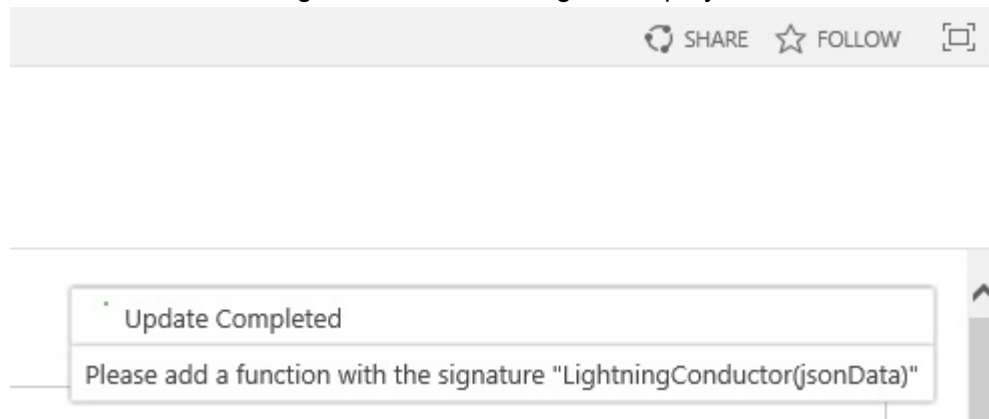
1. Open the [Configure Lightning Conductor Web Part](#) dialog.
2. On the [Web Part](#) tab, in the **Configure Display Provider** section, select **JSON provider**.
The Display tab disappears as you will need to provide JavaScript to render the content.
3. Use the [Data Source](#) and [Column](#) tabs to select the content you wish to aggregate.
4. At the bottom of the **Configure Lightning Conductor Web Part** dialog, click **Save**.
The Web Part properties are updated and the Web Part attempts to call a JavaScript function with a signature **LightningConductor(jsonData)**.
5. Link the JavaScript file to the page where you have added the Lightning Conductor Web Part. The JavaScript file should contain the **LightningConductor(jsonData)** function and the client-side code to render the content provided by the Lightning Conductor Web Part.

Contents of the JavaScript file

The JavaScript file should contain the **LightningConductor** function:

```
< script language="JavaScript" >
  function LightningConductor(jsonData) {
    // Your code here
  }
< /script >
```

Otherwise the following notification message is displayed:



You could upload the JavaScript file, for example, to the **Site Assets** library, add a **Content Editor** Web Part (CEWP) on the same page as the LCWP, and then point to the JavaScript file using the **To link to a text file, type a URL** text box in the **Content Link** section in the Web Parts tool pane.

Alternatively you can include the script directly on the page using one of the following methods:

- Add the CEWP to your page. You will find the CEWP in the Web Part pane, by clicking, under **Categories, Media and Content**.
 - Place the cursor inside CEWP.
 - On the **Format Text** tab, click **Edit Source** in the **Markup** group to display the **HTML Source** dialog.
 - Type the JavaScript in the **HTML Source** text box, and then click **OK**.
 - On the **Page** tab, click **Stop Editing** if this is a Web Part page or if you have added the CEWP to a wiki page, on the **Page** tab, click **Save**.
- Add the HTML Form Web Part to your page. You will find the HTML Form Web Part in the Web Part pane, by clicking, under **Categories, Forms**.
 - From the Web Part menu, click **Edit Web Part**.
 - In the Web Part tool pane, in the **Form Content Editor** section, click **Source Editor** to display the **Text Editor — Webpage Dialog**.

- Delete the existing code, and then type your JavaScript into the text box, and then click **OK**.
- In the Web Part tool pane, click **OK** or **Apply**.
- On the **Page** tab, click **Stop Editing** if this is a Web Part page or if you have added the CEWP to a wiki page, on the **Page** tab, click **Save**.
- On a wiki page, include content directly in the page.
 - Place the cursor in the same column as the LCWP and then on the **Format Text** tab, click **Edit Source** in the **Markup** group to display the **HTML Source** dialog.
 - Type the JavaScript in the **HTML Source** text box, and then click **OK**.
 - On the **Page** tab, click **Save**.

[Go to top →](#)

Data Source tab

The **Data Source** tab is the second tab on the [Lightning Conductor Web Part](#) dialog and allow you to build your rollup query. It consists of one check box, [Show Selection of Lists for Columns](#) and six sections:

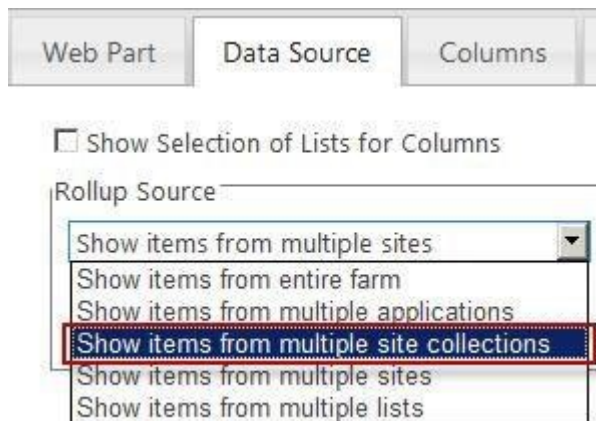
1. [Rollup Source](#)
2. [List/Item Types](#)
3. [Caching Settings](#)
4. [Audience Targeting Settings](#)
5. [Filtering Settings](#)
6. [Miscellaneous](#)

[Configuring the Lightning Conductor Web Part →](#)

Rollup Source

The **Rollup Source** section, is the first of six sections on the [Data Source tab](#). Use this section to configure the Web Application(s), site collection(s), site(s) or list(s) that you would like to aggregate. Use the following steps to configure this section:


1. From the **Rollup Source** drop down list, select one of the following options;
 - **Show Items from entire farm**
(this option is only available if you are a SharePoint farm administrator, that is, only SharePoint farm administrators can automatically select across the farm).
 - **Show Items from multiple applications**
(this option is only available if you are a SharePoint farm administrator, that is, only SharePoint farm administrators can automatically select across multiple web applications).
 - **Show items from entire application**
(this option is available if you are not a SharePoint farm administrator, that is, if you're not a SharePoint farm administrator, you can automatically select only from the web application where you are trying to use the Lightning Conductor Web Part).
 - **Show Items from multiple site collections**
 - [Show Items from multiple sites](#) (selected by default)
 - [Show Items from multiple lists](#)

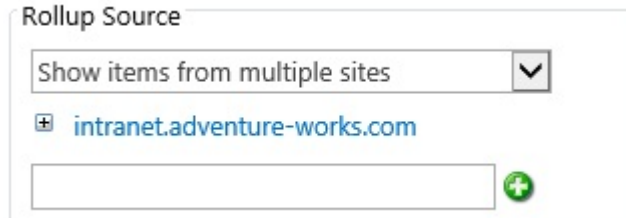


7. If you choose any option other than **Show Items from the entire Farm** a tree view is displayed, which you can use to select the data source to aggregate. The tree view that appears will differ depending upon whether the options selected contains Web Applications, site collections, sites or lists.




Note: You may aggregate the content from the entire farm, across multiple web applications or also across multiple site collections. When selecting the content source, keep in mind that you can still get

the content from anywhere in the farm. For example, you may choose individual lists from different web applications in your aggregation.

8. In version 2.1.0.0, if you are not a SharePoint farm administrator, and have not selected **Show Items from entire applications**, you can add additional accessible site collections in other web applications to the tree view. Use the text box to type or cut/paste the URL of the SharePoint site collection in other web application in your SharePoint farm that you would like to include in the rollup query. Click the green plus  icon to the right of the text box.



A new tree view of the site collection is added to the *Rollup Source* section. If the user who is configuring the LCWP, does not have permission to that site collection, that is, to the root site of site collection, or no such site collection exists, then no URL is added to the tree view. You use the text box more than once to add multiple site collections to the tree view.

9. Expand the tree view(s) by clicking the plus sign (+).
10. To include a data source in your query, select the check box to the left of the data source. Three icons are displayed to the right of an object. You can use the icons to help you quickly select multiple items. You can use these icons to:
 -  Select all child object
 -  Invert selection
 -  Uncheck all child objects

You will only be able to configure a query based upon the permissions you have. Items returned are security trimmed for all users. Therefore it is recommended to configure the Web Part with a user id that has permissions to all content in your installation, thereby allowing you to configure the rollup of content across the farm.

[Go to top →](#)

Show items from multiple sites

When you have selected **Show items from multiple sites**, there is also a checkbox to the right of the 3 icons, which when selected includes in your rollup query sub sites, both current and yet to be created sub sites.

Configure Lightning Conductor Web Part

Web Part | Data Source | Columns | Display

☐ Show Selection of Lists for Columns

Rollup Source

Show items from multiple sites ▼

- [-] intranet.dp.local
 - + [http://intranet.dp.local]
 - + [http://intranet.dp.local/sites/appcatalog]
 - + [http://intranet.dp.local/sites/dev]
 - [-] [http://intranet.dp.local/sites/teams]
 - [-] [Teams] ✓ ✓ ✗ ☐
 - + [BCS 2013 Demo] ✓ ✓ ✗ ☐
 - + [DVWP2013] ✓ ✓ ✗ ☐
 - [Lightning Conductor 2013] ✓ ✓ ✗ ☒
 - [Search] ☐
 - + [SPSUK] ✓ ✓ ✗ ☐
 - + [http://dev.apps.dp.local]
 - + [SharePoint - 80]

When aggregating content across multiple site collections, note that the list types displayed in the List/Items Types section are only those List Types available in each site collection where you have selected a SharePoint object.

[Go to top →](#)

Show items from multiple lists

Instead of rolling up a list type from multiple sites, site collections or web applications, it is also possible to choose individual lists within your query, by selecting **Show items from multiple lists**. For example, *Contacts* from *Site A* and *Contacts* from *Site B*. It is also possible to aggregate *Contacts* from *Site A* and *Tasks* from *Site A* as long as the two or more lists have a column in common. You may select these from any site within any site collection contained within the current Farm. If you select individual lists, you will not be prompted for the list type to aggregate from.

Configure Lightning Conductor Web Part

Web Part

Data Source

Columns

Display

☐ Show Selection of Lists for Columns

Rollup Source

Show items from multiple lists

intranet.dp.local

+

http://intranet.dp.local

+

http://intranet.dp.local/sites/appcatalog

+

http://intranet.dp.local/sites/dev

+

http://intranet.dp.local/sites/teams

Teams

+

BCS 2013 Demo

+

DVWP2013

+

Lightning Conductor 2013

+

Search

+

SPSUK

☞

☒ Announcements

📁

☐ Documents

📁

☐ Form Templates

📅

☐ MicroFeed

📁

☐ Site Assets

🌐

☐ Site Pages

📁

☐ Style Library

🔧

☐ test

+

http://dev.apps.dp.local

+

SharePoint - 80

[Go to top →](#)

[Data Source tab →](#)

[— Data Source tab](#)


[Show Selection of Lists for Columns —>](#)

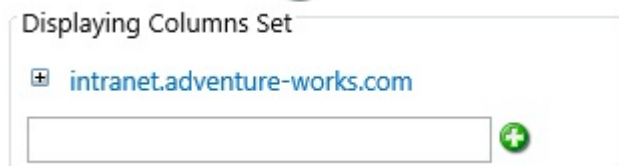
Show Selection of Lists for Columns

On the [Data Source tab](#), when the **Show Selection of Lists for Columns** check box is selected, the **Displaying Columns Set** section is displayed. It is not necessary to use this section. For example, if the lists you have selected in the Rollup Source section have identical columns, that is, they all use the same content type(s), then you do not need to use this section.

You only need to use this section when the lists you have selected, have custom column(s) and you want to use those custom column(s) to decide what to display in the Lightning Conductor Web Part. You can select more than one list when the custom columns are unique in each list. The columns from the selected lists, are then displayed in the [Columns Configuration](#) section on the [Columns](#) tab.

For example, you have two Task lists: *TaskListA* and *TaskListB*. *TaskListB* has a custom column called *MyCustomColumn*. All other columns are the same in both Tasks lists. If you want to display *MyCustomColumn* or use the values in the *MyCustomColumn* to filter what to display in the Lightning Conductor Web Part, select the check box to the left of *TaskListB* when you have expanded the tree view for that site in the **Displaying Columns Set** section. Complete any other configurations on the [Data Source tab](#), and then on the [Columns tab](#), use the custom columns from each selected list to build what is to be displayed with the Lightning Conductor Web Part.

In version 2.1.0.0, if you are not a SharePoint farm administrator, and in the [Rollup Source](#) section you have not selected **Show Items from entire applications**, you can add additional accessible site collections in other web applications to the tree view. Use the text box to type or cut/paste the URL of the SharePoint site collection in other web application in your SharePoint farm that you would like to include in the rollup query. Click the green plus  icon to the right of the text box.



A new tree view of the site collection is added to the *Rollup Source* section. If the user who is configuring the LCWP, does not have permission to that site collection, that is, to the root site of site collection, or no such site collection exists, then no URL is added to the tree view. You use the text box more than once to add multiple site collections to the tree view.

[— Rollup Source](#)

[List / Item Types —>](#)

[Data Source tab →](#)

List / Item Types

The **List/Item Types** section is the third of six sections on the [Data Source](#) tab of the [Lightning Conductor Web Part](#) dialog. Once you have selected the [rollup source](#), you can select the type of list that you would like to aggregate from. The choice of list types includes that of custom list templates and custom list definitions. For example you may choose Tasks as the selected list type because you want to return all Tasks lists from the query you specific. This option is not available if you have chosen to aggregate from specific lists since the list type for them is already defined by your selection.

You do not need to use this section when **Show items from multiple lists** is selected from the [Rollup Source](#) drop down list or you have selected list(s) in the [Displaying Columns Set](#) section, since you have already selected the list type for your rollup query.

Once you have selected the rollup source, you can then select the type of list.

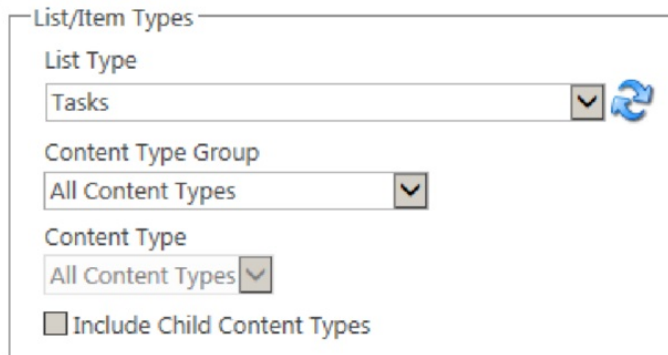
1. In the **List/Item Types** section, select a list type from the **List Type** drop down list.
The list types displayed in the list box, includes custom list templates and custom list definitions, as well as the out-of-the-box list definitions. For example, select Tasks when you want to display items from all Tasks lists in your Lightning Conductor Web Part.



If the **List Type** drop down list, does not show the set of list types you expected to see, then the specific list template feature may not be activated at the top-level site of the site collection. Only list templates available for the site collection selected in the [Rollup Source](#) section will be displayed in the list box. If you change the source selected in the [Rollup Source](#) section, you should click the refresh icon to the right of the **List Type** drop down list.

2. Optionally select a content type to further refine your query. This is only required if your lists contain multiple Content Types.

- From the **Content Type Group** drop down list, select the required content type group.



The screenshot shows a configuration panel titled "List/Item Types". It contains four settings:

- List Type:** A dropdown menu with "Tasks" selected, accompanied by a refresh icon.
- Content Type Group:** A dropdown menu with "All Content Types" selected.
- Content Type:** A dropdown menu with "All Content Types" selected.
- Include Child Content Types:** An unchecked checkbox.

- From the **Content Type** drop down list, select the required content type.
- If your Content Type contains child content types, optionally select the **Include Child Content Types** check box, to return items from the child content types.

Include Child Content Types will include that of any Content Type that derives from your selection.

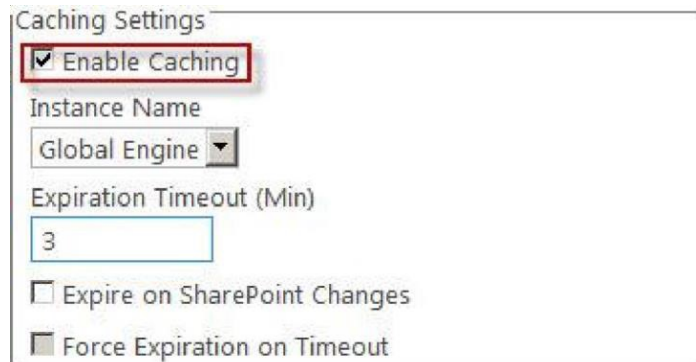
[Data Source tab →](#)

Caching Settings

Caching improves the performance of the Lightning Conductor Web Part. Without caching the content source is queried each time:

- The page loads
- On every page refresh
- Each refresh interval.

By default [Lightning Conductor Web Part](#) displays the results of the [data source](#) query without using the caching mechanism. To enabling caching, select the **Enable Caching** check box in the **Caching Settings** section on the [Data Source tab](#).



Caching Settings

☒ Enable Caching

Instance Name

Global Engine ▼

Expiration Timeout (Min)

3

☐ Expire on SharePoint Changes

☐ Force Expiration on Timeout

The first time the Lightning Conductor Web Part is displayed on a page, the resulting content from the data source query is stored in the object cache store associated with the cache engine instance. Subsequently the Web Part displays the content from the cache. From the **Instance Name** drop down list, you can select the cache instance that the Lightning Conductor Web Part will use. The default instance engine is, **Global Engine**, which is pre-defined. Your SharePoint server administrator can [configure additional caching engine instances](#) using the SharePoint 2013 Central Administration web site.

Each SharePoint object stored in the cache is tagged with the time it was last retrieved from the SQL Server SharePoint content database. The caching engine first tries the cache store to retrieve the metadata associated with a SharePoint object. If the object is not there or has expired, the caching engine retrieves the object from the SQL Server SharePoint content database and stores the updated object in the cache and updates the retrieving time of that object.

There are three cache object expiration strategies based on the configuration of the **Expiration Timeout** text box, and the two check boxes: **Expire on SharePoint Changes** and **Force Expiration on Timeout**:

1. **Expiration Timeout** only:

The SharePoint object will be fetched from the content database at the interval typed in the **Expiration Timeout** text box.

2. **Expiration Timeout** and **Expire on SharePoint Change** check box selected.

The cached object is considered as expired when the caching engine detects, that this object has been changed in SharePoint content database since the retrieving time of that object. This option is dependant on the use of the [SPChange log](#), which is a setting in the SharePoint 2013 Central Administration web site. The caching engine will use strategy based only on timeout for those objects when changes could not be determined using SharePoint change log.

3. **Expiration Timeout** and both **Expire on SharePoint Change** and **Force Expiration on Timeout** check boxes selected:

The cached object is considered as expired, if that object has been retrieved more than X minutes ago or when caching engine detects, that this object has been changed in the SharePoint content database since the retrieving time of that object, where X is the value taken from the “Expiration Timeout (Min)” text box.

What expiration strategy is best and what value should be specified in “Expiration Timeout (Min)” text box? There is no common answer to this question for all cases. It depends on the environment in which Lightning Conductor Web Part (LCWP) runs, on the user requirements, on the sort of items rolled up by LCWP, and so on. However, we can mention several situations for which the answer is precise:

- When items rolled up by LCWP are changed rarely, better performance is to use a strategy based on timeout only and to use large value as expiration timeout, for example, 180 minutes or more.
- When items rolled up by LCWP are changed often, but it is allowed to see the old states of that items but not older than several minutes. In this case it will be better for performance to use strategy based only on timeout and to use small value as expiration timeout (e.g. 10 minutes).
- When it is necessary to see only the current states of the items rolled up by LCWP, than it is required to use strategy based on detecting changes in SharePoint database (with or without forcing expiration on timeout). In this case it is not so important which value will be used as expiration timeout. Using “Force Expiration on Timeout” option could be used in situations when it is required to retrieve cached objects again even in the situation, when such changes will not be detected in SharePoint change log (e.g. in situations when in some reason several kinds of changes has not been logged in SharePoint change log).

Caching Settings where first made available with Lightning Conductor 2010 Web Part v3.0.

[Data Source tab →](#)

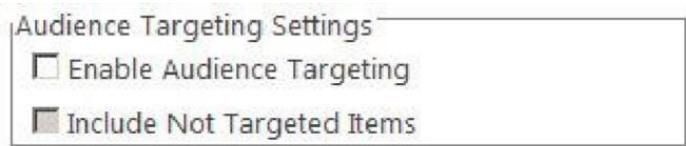
Audience Targeting Settings

The **Audience Targeting** section is on the [Data Source tab](#).

[Microsoft® SharePoint®](#) Server [Audience Targeting](#) allows items targeted to a specific audience to be filtered when aggregating them with the [Lightning Conductor Web Part](#). For example, if you have [audience target enabled](#) an Announcements list, instead of aggregating all announcements from that list, in the Lightning Conductor Web Part, you may only want to filter the items displayed depending on the user who is displaying the page. The user will need to be part of an [audience](#) and items in the list must be tag for that audience. This allows you to display only information in the Web Part that is relevant to the user.

Use the check boxes in the **Audience Targeting** section, as follows:

1. Select **Enable Audience Targeting**.
2. If you want to also return items to a user when that item has not been targeted to an audience, select the **Include Not Targeted Items**.



Audience Targeting Settings

☐ Enable Audience Targeting

☒ Include Not Targeted Items



For this feature to work, you must be using SharePoint® Server and Audience Targeting must be enabled for the lists that you are aggregating. Audience targeting is not available on SharePoint® Foundation.

[Data Source tab](#) →

Filtering Settings

The **Filtering Settings** section is the fifth of six sections on the [Data Source tab](#) of the [Lightning Conductor Web Part](#) dialog.



When using the [Lightning Conductor Web Part](#), there are two different types of filters that you can configure;

- **Persistent:** The persistent filters are set by the Site administrator (or at the very least be mapped to the Design permission level) and are configured on the [Display tab](#) of the [Lightning Conductor Web Part](#) dialog. Persistent filters limits the items of data that is seen to each user that visits the page. Users can then dynamically filter the items using the columns displayed within the Web Part. It is worth pointing out that you cannot set persistent filter on every column type. This is a Microsoft® SharePoint® restriction and not a restriction of the Lightning Conductor Web Part.
- **Dynamic.** Dynamic filters are used by users using the Web Part's filter icon . Dynamic filtering is enabled, that is, the filter icon  is displayed, when one of the dynamic filtering radio buttons is selected in the **Filtering Settings** section and the **Hide Dynamic Filtering Controls** check box is not selected, in the [Miscellaneous](#) section on the [Display tab](#).



The following options are available in the **Filtering Settings** section on the [Data Source tab](#):

1. Select one of the following radio buttons:

- Select **Use Only Persistent Filters** to allow all users see the same filtered values. Users can not use the dynamic filtering capabilities of the Web Part. This is the default setting.
- Select **Use Only Dynamic Filters** when you want all items displayed, and that users will then use the Web Part's filter icon  to limit the items displayed on the page, that is, ignore any persistent filter settings selected on the [Display tab](#).
- Select **Use Both Persistent and Dynamic Filters** to use a combination of persistent filters and dynamic filters. The persistent filter is used first by the Web Part to display a subset of items from the rollout source. The user can then use the Web Part's filter icon  to further limit the items displayed.

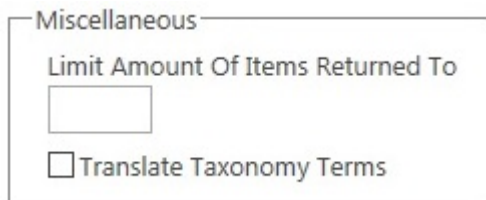
- Select **Ignore All Filters** to display all items from the rollup source, that is, the persistent filter settings selected on the [Display tab](#) are ignored and users cannot use dynamic filters.

2. Select the check box to ignore filters if the column does not exist. This is the default setting.

[Data Source tab →](#)

Miscellaneous

The **Miscellaneous** section is the last section on the [Data Source tab](#).



The screenshot shows a configuration panel titled "Miscellaneous". Inside the panel, there is a label "Limit Amount Of Items Returned To" followed by a text input box. Below this, there is a checkbox labeled "Translate Taxonomy Terms".

This section contains two options:

1. Use the **Limit Amount Of Items Return to** text box, to restrict the number of items returned from the data source. Use this option for performance reasons. This limit will be applied to the first X amount retrieved from the data source. Filters or Pagination on the [Display tab](#) can be set to return a specific subset. For example, if you would like to show the “Top Ten latest Announcements”, instead of typing a number in the **Limit Amount Of Items Returned To** text box, use the [Paging section](#) section on the [Display tab](#), and on the [Columns](#) tab, sort by the column, *Created* in descending order.
2. Select the **Translate Taxonomy Terms** check box when you are using multiple languages with [Managed Metadata](#), and you wish to use Management Metadata columns, to filter items or to display terms in the Lightning Conductor Web Part. This allows the Web Part to display translated terms according to the user’s browser language setting.

[Data Source tab](#) →

Columns tab

The **Columns** tab, consists of the [Columns Configuration](#) section and potentially two other sections:

- [Grouping Order](#). This section appears when at least one of the check boxes under **Group By** is selected. The **Group By** option does not appear if you have selected either the [XSL Style Display Provider](#) or [JSON Provider](#) on the [Web Part tab](#).
- **Sorting Order**: This section appears when you have selected either **Ascending** or **Descending** from one of the **Sorting** drop down lists.

Columns Configuration

[Update columns configuration](#)
[Remove columns configuration](#)
[Advanced filtering](#)

Name	Alias	Width, px	Display Format	Group By	Sorting	Allow Tags	Filtering	Formatting
<input checked="" type="checkbox"/> Task Name				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> % Complete			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Assigned To			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Task Status				<input checked="" type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Due Date			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Priority				<input checked="" type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> App Created By				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> App Modified By				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Attachments			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Completed			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Content Type				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Created			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Created By			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Description				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Edit			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Grouping Order

Priority





Task Status

[Configuring the Lightning Conductor Web Part →](#)




Columns Configuration

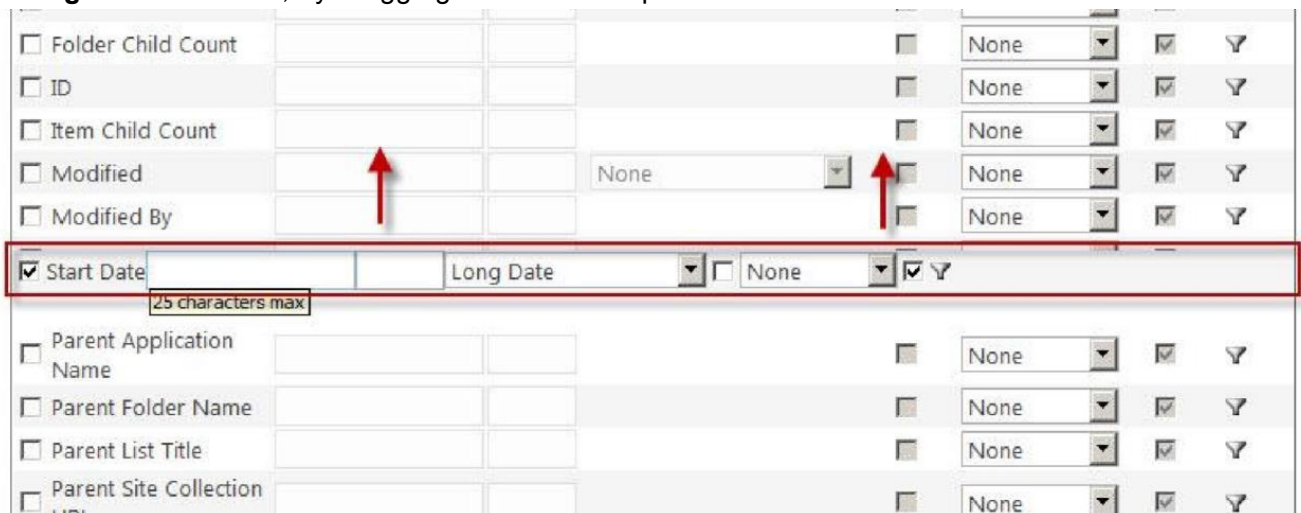
Use the **Columns Configuration** section on the [Columns tab](#) to select columns that should be displayed by the Lightning Conductor Web Part.

There are four links at the top right of the section that allows you to:

- Update the Lightning Conductor Web Part with the columns selected. 
- Remove all column configurations. 
- [Add calculated column](#) (new in version 2.1) 
- Configure [Advanced filtering](#). 

Below these three links you can configure:

- Columns to be displayed, by selecting the check box to the left of the column name. Above the left checkboxes, there are three icons, which allow you to select all columns , invert the selection , and uncheck all columns . You can set the order of the columns within the **Columns Configuration** section, by dragging the columns up or down.



<input type="checkbox"/>	Folder Child Count				None			
<input type="checkbox"/>	ID				None			
<input type="checkbox"/>	Item Child Count				None			
<input type="checkbox"/>	Modified			None	None			
<input type="checkbox"/>	Modified By				None			
<input checked="" type="checkbox"/>	Start Date	25 characters max	Long Date		None			
<input type="checkbox"/>	Parent Application Name				None			
<input type="checkbox"/>	Parent Folder Name				None			
<input type="checkbox"/>	Parent List Title				None			
<input type="checkbox"/>	Parent Site Collection				None			

- Column alias: Type in the **Alias** text box an alternate name for the column title.
- Column width: Type in the **Width, px** text box the width of the column in pixels.
- Number format: Select from the **Display Format** drop down list the format of numerical columns, for example, Date/Time, Number columns. You can also type a [custom date format](#), of the same format





as you use when using the [XSL view](#).

Configure Lightning Conductor Web Part

Columns Configuration

Update columns configuration

Name	Alias	Width, px	Formatting
<input checked="" type="checkbox"/> Task Name			
<input checked="" type="checkbox"/> Assigned To			
<input checked="" type="checkbox"/> Due Date			None Short Date Long Date Short Time Long Time Short Date Short Time Long Date Long Time Year And Month
<input type="checkbox"/> % Complete			
<input type="checkbox"/> App Created By			
<input type="checkbox"/> App Modified By			

- [Grouping](#) Select the **Group By** check box to the right of the column to group items by that column.
- **Sorting:** Use the **Sorting** drop down list to sort the items displayed using that column in ascending or descending order. To improve the performance of a lists or libraries, that contain a large number of items, you can create [indexes](#) on the columns you will be sorting on.
- **Allow Tags:** Use this check box for Rich Text column types. If the column contains HTML you can show or hide the HTML tags.
- [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 Configuration** section. Click the **Remove All Filters** icon , to remove all persistent filters from all columns.
- [Conditional Formatting](#). Click the **formatting** icon  to display the **Configure Conditional Formatting** dialog, which you can use to apply formatting to the items in the Lightning Conductor Web Part. Click the **Remove All Formatting** icon , to remove all filters from all columns.

On the [Web Part tab](#), when you select either the [XSL Style Display Provider](#) or [JSON Provider](#), then on the [Columns tab](#) in the **Columns Configuration** section you can only select columns, **Sorting** and **Filtering**.

[Configuring the Lightning Conductor Web Part →](#)

[— Columns tab](#)

[Calculated Columns —>](#)

Calculated Columns

From Lightning Conductor Web Part (LCWP) 2013 version 2.1.0.0, you can add calculated columns to your LCWP 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 Lightning Conductor Web 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 LCWP 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 LCWP calculated column, is not based on Microsoft Excel formulas, but on C# based operators, calculations and functions.

As with other columns, with a LCWP 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 LCWP calculated column](#) and information on [formulas](#) you can use.

Adding a Calculated Column

To add a LCWP calculated column, use the following steps:

1. Click the **Add calculated column**  icon in the top right hand corner of the [Columns Configuration](#) section on the [Configure Display Provider](#) step.

The *Add calculated column* dialog box 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**.

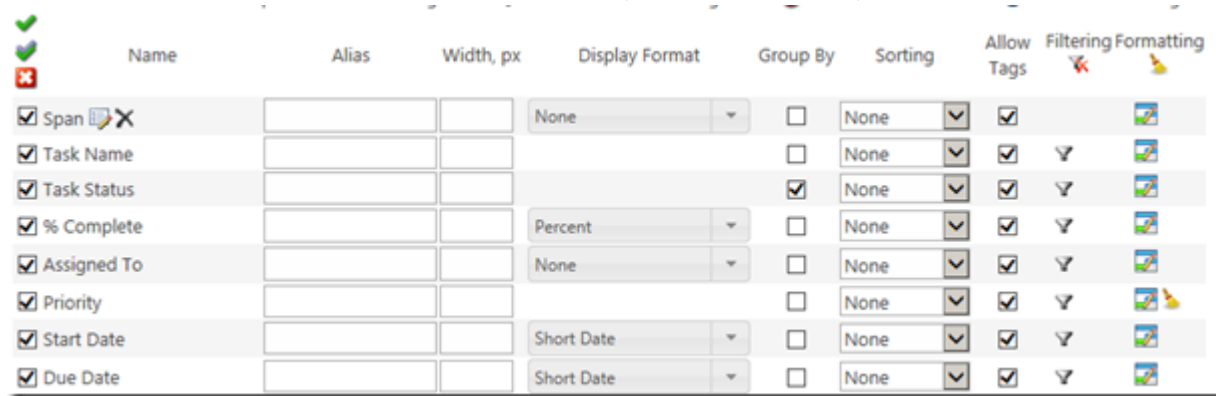
The screenshot shows the 'Add calculated column' dialog box. The 'Column name' field is 'Span'. The 'Column type' is 'String'. The 'Expression' section has a dropdown list of columns. The first item, '% Complete [Double]', is selected. A red arrow points to the 'Insert field' button, and another red arrow points to the selected item in the dropdown list. The dialog has 'Save' and 'Cancel' buttons at the bottom right.

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 LCWP.



	Name	Alias	Width, px	Display Format	Group By	Sorting	Allow Tags	Filtering	Formatting
<input checked="" type="checkbox"/>	Span			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/>	Task Name				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	Task Status				<input checked="" type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	% Complete			Percent	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	Assigned To			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	Priority				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	Start Date			Short Date	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	Due Date			Short Date	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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 →](#)

Information on calculated column formulas

This section contains examples of formulas you can use in the LCWP calculated column.

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.

- 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]
- Use [String properties](#), for example, to find the length of the values stored in the *Title* column:
[Title].Length
- Use [String methods](#), for example,

- To convert a strings stored in the *Title* column to lower case,
[Title].ToLower()
- To retrieve a substring for values stored in the *Title* column, starting from character position 5, for a length of 6 characters,
[Title].Substring(5,6)
- To remove all spaces for values stored in the *Title* column,
[Title].Replace(" ","")

Date and time formulas

You can use formulas to perform calculations that are based on dates and times, such as finding the day of the week, adding a number of days, months, or years to a date, calculating the difference between two dates, and converting time to a decimal value.

1. Use [DateTime properties](#), such as, displaying the day of the week for values stored in the *Created* column,
[Created].Value.DayOfWeek
2. Use the [DateTime methods](#) to add a date/time component to a column, for example to add two hours to the *Created* column, use the following formula,
[Created].Value.AddHours(2).ToString("YYYY-MM-DD HH:MM")
3. Calculate the difference between two dates, use the subtraction operator (**-**) and then use [TimeSpan properties](#) 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.
([DueDate].Value-[StartDate].Value).TotalDays

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:

([Created].Value.Year<DateTime.Now.Year)?"Before":"After"

Also, if the LCWP conditional formatting feature does not satisfy all your need, you can apply formatting as part of your calculated column, for example,

`([Created].Value.Year<DateTime.Now.Year)?"Before":"After"`

This would result in a Lightning Conductor Web Part displaying data similar to the following screenshot.

Calc4	Created 
After	1/21/2014 00:30:3
Before	11/29/2013 08:52
Before	11/28/2013 11:34
Before	8/19/2013 13:23:3
Before	8/2/2013 10:59:24

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 Fields](#) and [Math Methods](#), for example,

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

`Math.Round([NoTasks].Value)`

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

`Math.Pow([Radius].Value,2)*Math.PI`

[Go to top →](#)

[— Columns Configuration](#)

[Grouping →](#)

Grouping

On the [Columns](#) tab, in the [Columns Configuration](#) section on the [Columns tab](#), each column has a **Group By** option that allows you to group the items returned. You must first select the check box to the left of the column, before you are able to select the check box under **Group By**. On the [Display tab](#) you can then enable whether to initially show items expanded or collapsed within the group.

An example would be to group by the **Status** column inside a **Tasks** list, as shown in the following figure.

Lightning Conductor

View ▸ All Tasks ▾

Task Name	Assigned To	Due Date	Priority	Task Status
In Progress				
Task2	SP2013\brett	4/4/2013	(2) Normal	In Progress
Task3	SP2013\brett	5/5/2013	(2) Normal	In Progress
Task4	Zoe	6/6/2013	(2) Normal	In Progress
Not Started				
Task1	SP2013\brett	1/4/2013	(2) Normal	Not Started
Task5	SP2013\brett	7/7/2013	(2) Normal	Not Started

If you wish to group using multiple columns, you can change the order of the grouping, using the **Grouping Order** section, by dragging columns into group order. The column at the top of the **Grouping Order** section is the first column used to group the returned items.



[Columns Configuration →](#)

Column Filtering


You can filter the number of items displayed within the Lightning Conductor Web Part, based on one or more conditions using:

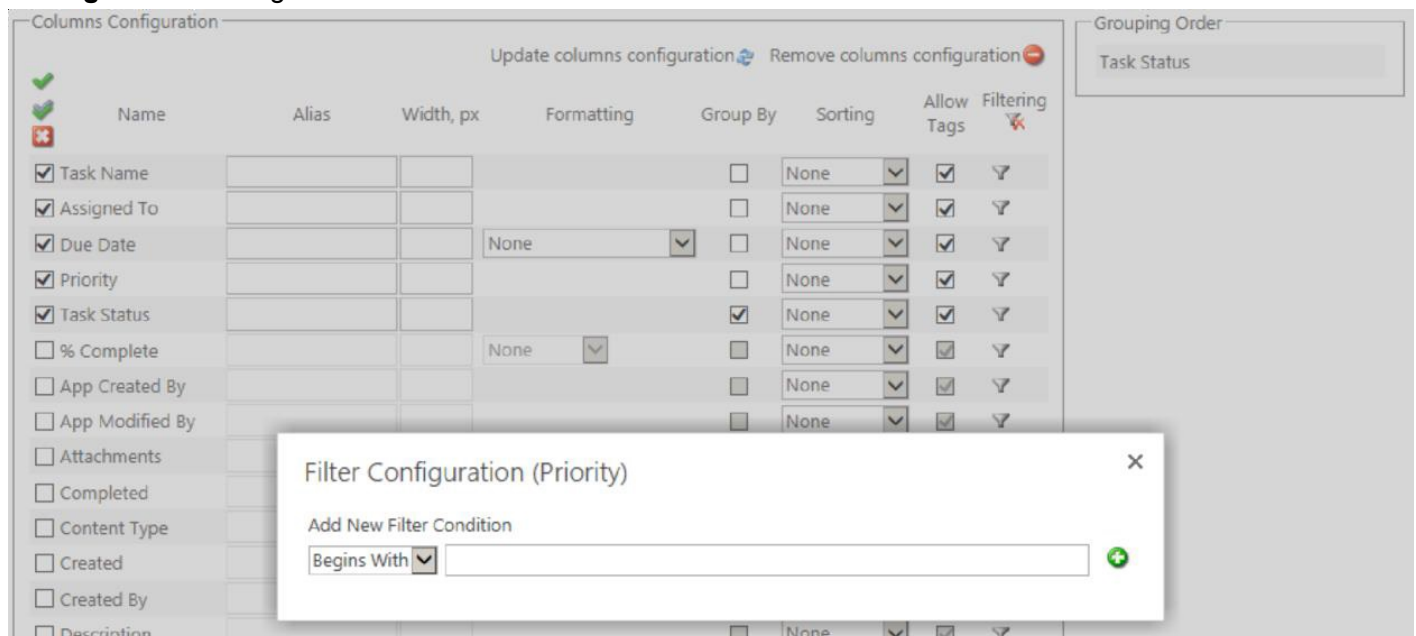
- Values in one column using the [filtering icon](#)
- Values in more than one columns using the [Advanced filtering](#) link.


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.

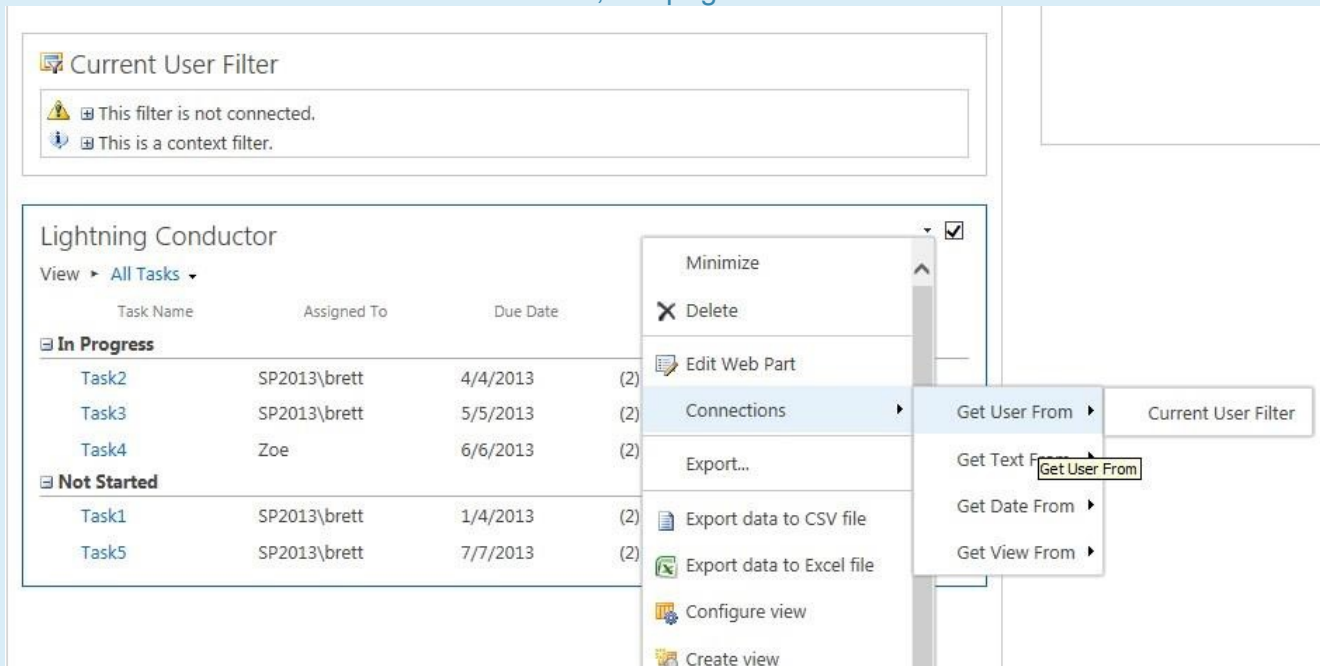
You can apply the filter and remove the filter using the **filtering icon** , which displays the **Filter Configuration** dialog.



Select the condition from the drop down list, type a value in the text box and then click the green plus icon . A dialog displays stating that the filter configuration was updated successfully.

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 **Filtering** column heading.

The Lightning Conductor Web Part can also be filtered using web part connections. You can obtain a filter such as a current user filter connected to the assigned to column. To connect the Lightning Conductor Web Part to consume data from another Web Part, on the Lightning Conductor, Web Part menu, click **Connections** to display the **Choose Connection** dialog. To see the **Connections** link on the Web Part, the page must be in edit mode.




The screenshot shows the Lightning Conductor Web Part interface. At the top, there is a 'Current User Filter' section with two status messages: 'This filter is not connected.' and 'This is a context filter.' Below this is a table titled 'Lightning Conductor' with columns: Task Name, Assigned To, Due Date, and a count. The table is divided into 'In Progress' and 'Not Started' sections. A context menu is open over the table, showing options like 'Minimize', 'Delete', 'Edit Web Part', 'Connections', 'Export...', 'Export data to CSV file', 'Export data to Excel file', 'Configure view', and 'Create view'. The 'Connections' option is highlighted, and a sub-menu is visible showing 'Get User From' (which is linked to 'Current User Filter'), 'Get Text From', 'Get Date From', and 'Get View From'.

Task Name	Assigned To	Due Date	
In Progress			
Task2	SP2013\brett	4/4/2013	(2)
Task3	SP2013\brett	5/5/2013	(2)
Task4	Zoe	6/6/2013	(2)
Not Started			
Task1	SP2013\brett	1/4/2013	(2)
Task5	SP2013\brett	7/7/2013	(2)

Advanced Filters

Occasionally, you may want to filter on more than one column using And or Or operators. This can be done with the Lightning Conductor Web Part using the **Advanced filtering** link, which is display in the top right of the [Columns Configuration](#) section of the [Columns tab](#).

To filter on more than one column:

1. Click the **Advanced filtering** option in the top right hand corner of the **Columns Configuration** section on the **Columns** tab.
2. Click the green plus icon  to add a new level of filtering.

3. Select the column to apply the filter to.
4. Select the operator such as **Equals**.
5. Set the value.
6. You can repeat these steps for each column that you wish to filter on.

Advanced Filtering



And

DueDate Equal 7/31/2013 Today ☐ Days Offset Negative ☐

Priority Equal



Save Cancel

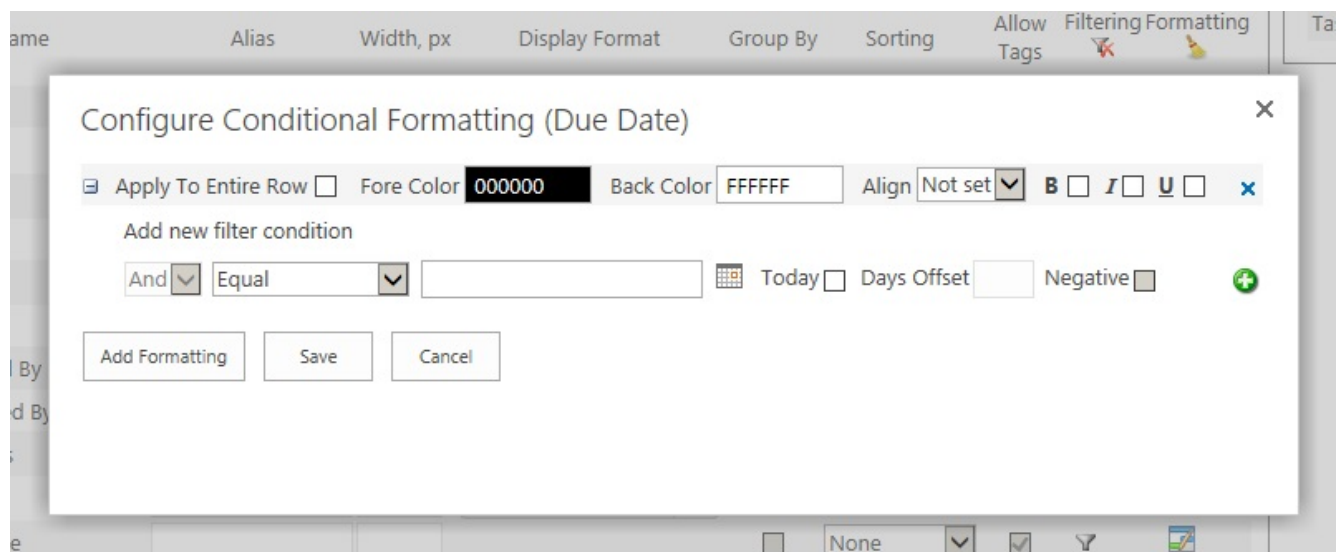
[Columns Configuration →](#)

Conditional Formatting


Formatting can be applied to the content of your [Lightning Conductor Web Part](#) based upon a condition being true or false. For example, if you are rolling up Task items from Task Lists, you may want to display Tasks that are past due in red font rather than black font. It is possible to have multiple conditions using the And and Or operators.

To apply conditional formatting:

1. On the [Columns tab](#), in the [Column Settings](#) section, click the formatting icon  next to the column that contains the value which you want to use for the condition to be used when making the decision to format items. For example, you would click the formatting icon  to the right of the **Due Date** column, if you wanted to display over due Tasks in red.
2. Select the **Apply To Entire Row** check box when you want the entire row to be formatted rather than the column value.



3. Select the **Fore Color**, **Back Color**, **Align**, **B** old, **I** talic, **U** nderline options as required.

4. Under **Add new filter condition**, set the condition and then click the green plus icon .

5. Click **Add Formatting** to add additional formatting options.

6. Click **Save** to apply the formatting to the Web Part

Lightning Conductor



View ▸ **Tasks** ▾

Task Name	% Complete	Assigned To	Task Status	Due Date	Priority
(2) Normal					
Completed					
Task5	1	SP2013 \\brett	Completed	5/5/2013	(2) Normal
In Progress					
Task2	0.5	SP2013 \\brett	In Progress	4/4/2013	(2) Normal
Task4	0.5	Zoe	In Progress	8/23/2013	(2) Normal
Task5	0.25	SP2013 \\brett	In Progress	7/7/2013	(2) Normal
Not Started					
Task1	0	SP2013 \\brett	Not Started	1/4/2013	(2) Normal

[Columns Configuration →](#)

Display tab

When the **SPGridView Display Provider** is selected in the **Configure Display Provider** drop down list on the [Web Part](#) tab, the **Display** tab contains three sections, and a text box where you can type the text you want to display if no items were rolled up. The three sections are:

- [Paging](#)
- [Grouping and Linking](#)
- [Miscellaneous](#)

Note: This tab is not displayed if **JSON Provider** is selected in the **Configure Display Provider** drop down list on the [Web Part](#) tab.

[Configuring the Lightning Conductor Web Part →](#)

Pagination

Use **Paging** section on the [Display tab](#) of the [Configure Lightning Conductor Web Part](#) dialog to configure your pagination options. This section contains three options:

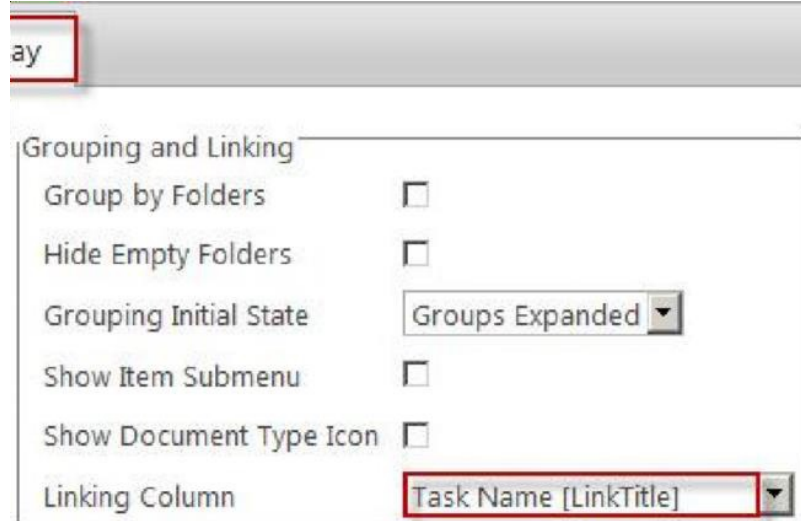
1. **Items Per Page:** Type the number of items to display, for example **25**. The default is
2. **Pager Horizontal Align.** Select from the drop down list: **Left**, **Right** or **Center**. Left is the default.
3. **Pager Position.** From the drop down list select; **Top**, **Bottom** or **Both**. Bottom is the default.

The screenshot shows the 'Display' tab of the 'Configure Lightning Conductor Web Part' dialog. The 'Paging' section is highlighted with a red box. It contains three settings: 'Items Per Page' set to 10, 'Pager Horizontal Align' set to Left, and 'Pager Position' set to Bottom. Below these settings is a text box labeled 'Enter text for displaying if no items was rolled up'. To the right of the 'Paging' section, there is a vertical list of options: 'Grou', 'Grc', 'Hid', 'Grc', 'Shc', 'Shc', and 'Link'.

[Configuring the Lightning Conductor Web Part →](#)

Grouping and Linking

The **Grouping and Linking** section is on the [Display tab](#), of the [Lightning Conductor Web Part](#) dialog.



The screenshot shows the 'Grouping and Linking' section of a dialog box. It contains several settings:

- Group by Folders:** ☐
- Hide Empty Folders:** ☐
- Grouping Initial State:** Groups Expanded (dropdown)
- Show Item Submenu:** ☐
- Show Document Type Icon:** ☐
- Linking Column:** Task Name [LinkTitle] (dropdown, highlighted with a red box)

Use this section as described below:

1. **Group by Folders:** When lists and libraries contain folders, you can display the folder structure in the Lightning Conductor Web Part by selecting this check box. Ensure that the Parent Folder name column is chosen on the [Column tab](#).
2. **Grouping Initial State:** From the drop down list select either **Groups Expanded** (default) or **Groups Collapsed**.
3. **Show Count of Items in Groups:** Select this check box if you want a count of items in groups to be displayed.
4. **Show Item Submenu:** By default this check box is not selected. When the check box is selected, and a column is selected from the **Linking Column** drop down list, then a item sub menu is available. The sub menu is also known as a list item menu (LIM). The sub menu provides two links: **View Properties** or **Edit Properties**. In document libraries, when the check box is select, the hyperlink when clicked, opens the file with the program associated with the extension of the file rather than displaying the properties of the file.

Note: The Lightning Conductor 2013 Web Part (LCWP) does not display the FULL list item menu you usually see on the out-of-the-box list or library Web Parts, therefore the LCWP does not fully replicate

the functionality of out-of-the-box Web Parts, which display the contents of list and libraries.

5. **Link to Item Directly:** By default this check box is not selected. This check box is only applicable to libraries and when you have selected a column in the **Linking Column** drop down list. This check box is not needed when the **Show Items Submenu** check box is selected. When the **Show Items Submenu** check box is selected, this check box will be inactive (greyed).

When both the **Show Items Submenu** and the **Link to Item Directly** check boxes are not selected and you have selected a column from the **Linking Column** drop down list, then in the Web Part, when the link is clicked, the properties of the file are displayed. When the **Show Items Submenu** is not selected and the **Link to Item Directly** check box is selected, then in the Web Part, when the link is clicked, the file opens with the program that is associated with the file's extension on the user's computer.

6. **Show Document Type Icon:** This option is only applicable when you have decided to include document libraries in your rollup query. By default this check box is not selected. Select this check box when you want an icon to be displayed to the left of the document to indicate the file type. File types are identified using the file's extension. A blank document icon is displayed for unknown file types.
7. **Linking Column:** When **SPGridView** is selected as the display provider on the [Web Part tab](#), which is the default display provider, you can select one column which becomes a link to the SharePoint list item or document. The column that you want to use as the link, must be selected on the [Columns tab](#), otherwise an error is displayed. Usually you would select the **Title** or **Name** column within a document library. By default the link, when clicked, displays the property page for the item or document. For document libraries, if you want the link to open the file in a program, select the **Link to Item Directly** check box.

[Configuring the Lightning Conductor Web Part →](#)

Miscellaneous

The **Miscellaneous** section is on the [Display tab](#) of the Lightning Conductor Web Part dialog.




Miscellaneous

Show Grid Header ☒

Grid Header Horizontal Align Center ▼

Hide Dynamic Filtering Controls ☒

Use the options in this section, as described below:

1. Select the **Show Grid Header** check to show the column names of the columns selected on the [Columns tab](#). The default is to show column names.
2. From the **Grid Header Horizontal Align** drop down list, select **Left**, **Centre** or **Right** to align the column names. The default is **Centre**.
3. Select the **Hide Dynamic Filtering Controls** check box to prevent users from dynamically filtering items displayed in the Lightning Conductor Web Part. By default the check box is selected, that is, the filter icon  is displayed to the right of the column names in the Web Part, when dynamic filtering is enabled in the [Filtering Settings](#) section on the [Data Source tab](#). When this check box is selected, and no dynamic filter option is selected in the [Filtering Settings](#) section, then the filter icon is not displayed.
4. **Store Dynamic Filters in Server:** You can only select this check box, when the **Hide Dynamic Filtering Controls** check box is not selected. By default when a user dynamically filters the items displayed by the Web Part, their filter choices are saved in memory on the computer where the user's browser is launched. Select the **Store Dynamic Filters in Server** check box, when the users's computer are running low on memory.

[Configuring the Lightning Conductor Web Part →](#)

How to Configure LCWP Programmatically

This page describes how to programmatically configure the [Lightning Conductor Web Part](#) (LCWP). This page uses the following scenario to describe how to program the LCWP:

Scenario: You wish to configure the LCWP, which is located in some site, in such way, that it will roll up all documents from current site, excluding sub sites. You wish to display those file that were created within the last 5 days and display the content in a grid, with paging enabled and each page contains 10 items.

The following steps describes how you might achieve this:

1. [Add a LCWP on a page](#) in the site, where you want to programmatically configure a LCWP and [configure the Web Part](#) as you would to achieve the same results as you want to achieve programmatically. For our scenario the important aspects for the configuration are as follows:

- On the [Web Part tab](#), in the **Configure Display Provider** section, select **SPGridView Display Provider** if it is not already selected.

Configure Display Provider

Specify Display Provider which will most suitable for your needs.

SPGridView Display Provider ▼

Provides data displaying for Lightning Conductor using SharePoint SPGridView control. This display provider displays data using familiar table structure and current SharePoint page style. Also SPGridView allows items submenus, paging, sorting, grouping and dynamic filtering.

- On the [Data Source tab](#):
 - In the [Rollup Source](#) list, select **Show items from multiple sites** if not already selected, and then select one of the sites from the hierarchy tree. Ensure you do not include the include sub

sites checkbox. Also no not select any list or library.

The screenshot shows the 'Data Source' tab with the following configuration:

- ☐ Show Selection of Lists for Columns
- Rollup Source: **Show items from multiple sites** (selected)
- intranet.adventure-works.com
 - ☐ http://intranet.adventure-works.com
 - ☐ http://intranet.adventure-works.com/my
 - ☐ http://intranet.adventure-works.com/sites/AppCat
 - ☐ http://intranet.adventure-works.com/sites/BI
 - ☐ http://intranet.adventure-works.com/sites/LT
 - ☐ Lightning Tools (checked)
 - ☒ **Lightning Conductor Web Part** (checked)
 - ☐ http://intranet.adventure-works.com/sites/SP2010

- In the [List Type](#) list, select **Document Library**.

The screenshot shows the 'List/Item Types' dialog box with the following configuration:

- List Type: **Document Library** (selected)
- Content Type Group: All Content Types
- Content Type: All Content Types
- ☐ Include Child Content Types

- On the [Columns](#) tab:
 - Select the columns you wish to display, for example, **Name**, **File Size** and **Created**.

- Then to the right of **Created**, click the **Filter** icon.

Columns Configuration

Update columns configuration Remove columns configuration Advanced filtering

Name	Alias	Width, px	Display Format	Group By	Sorting	Allow Tags	Filtering	Formatting
<input type="checkbox"/> App Created By				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input type="checkbox"/> App Modified By				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input type="checkbox"/> Check In Comment				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input type="checkbox"/> Checked Out To			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input type="checkbox"/> Content Type				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input type="checkbox"/> Copy Source				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> Created			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input type="checkbox"/> Created By			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input type="checkbox"/> Edit			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input type="checkbox"/> Encoded Absolute URL				<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> File Size			None	<input type="checkbox"/>	None	<input checked="" type="checkbox"/>		

Configure filtering for "Created [Created]" column

- On the **Filter Configuration (Created) Column** dialog:

- Select **Greater or Equal**,
- Select the **Today** check box,
- Type **5** in the **Days Offset** text box
- Select the **Negative** check box
- Click the **Save new filter condition** icon.

Filter Configuration (Created)

Add new filter condition

Greater Or Equal 12 AM 00 Today ☒ Days Offset 5 Negative ☒

- Click **OK** to close the dialog box with the message: **Filters configuration have been updated successfully.**
- On the [Display tab](#), in the [Paging](#) section, type **10** in the Items Per Page text box.

Web Part Data Source Columns Display

Paging

Items Per Page

Pager Horizontal Align

Pager Position

Grouping and Linking

Group by Folders

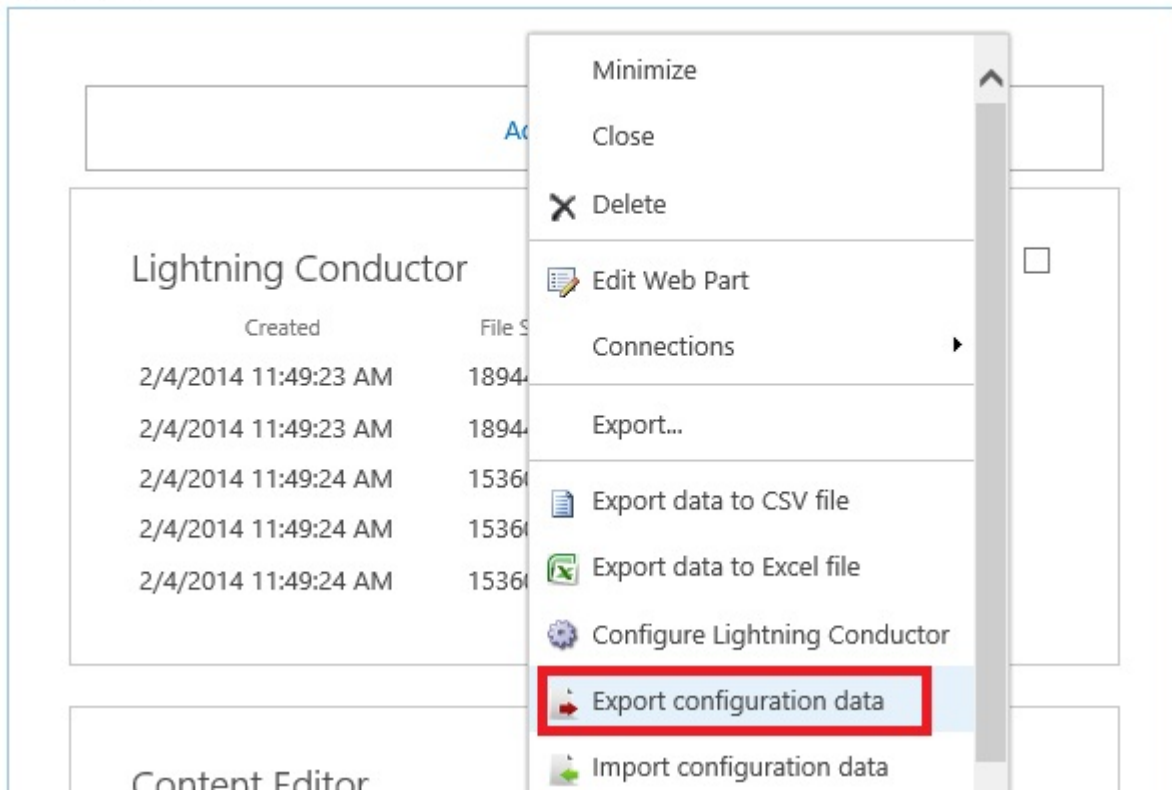
Grouping Initial State

Show Count of Items in Groups

- Click **Save**. The LCWP displays the documents from the document libraries in the chosen site.
- Save the page.

2. From the Web Part menu of the LCWP, click **Export Configuration Data**.

Left Column



and then save

the XML file to your desktop or to a folder on your computer.

3. If necessary modify the configuration xml file and use the supported LCWP custom tokens, in place of some the Id attributes. Custom tokens are similar to variables which you can refer to in your code to obtain information. The LCWP supports the following custom tokens:

- **#CurrentWebAppId#**. Use this custom token for the value of the **Id** attribute of the **Application** element, which is the child element of the **SearchScopeTree** element. LCWP replaces this token with the id of current web application at runtime.
- **#CurrentSiteId#**. Use this custom token for the value of the **Id** attribute of the **SiteCollection** element, which is the child element of the **SearchScopeTree** element. LCWP replaces this token with the id of current site collection at runtime.
- **#CurrentWebId#**. Use this custom token for the value of **Id** attribute of the **Web** element, which is the child element of the **SearchScopeTree**. LCWP replaces this token with the id of current web at runtime. **Note** developers refer to sites as webs, and site collections a sites.
- **#CurrentWebId#**. Use this custom token as value of the **WebId** attribute of the **List** element, which is the child element of the **SearchScopeTree** element. LCWP uses value of **Title** attribute at runtime to find the list from current site with given title and replaces value of **WebId** attribute with Id of found list.

Note: the **SearchScope** element is a child element of the **DataSourceProviderConfiguration**, **Settings** portion of the xml file, and can usually be found towards the end of the xml file.

For our example we need to modify the **Id** attribute of the **Web** element to use the **#CurrentWebId#** custom token. After the modification, the **DataSourceProviderConfiguration** portion of the xml file will look similar to the following figure:

```
</Column>
</Columns>
</DisplayProviderConfiguration>
- <DataSourceProviderConfiguration>
- <Settings p3:type="RollupEngineProviderSettings" EnableAudienceTargeting="false"
  IncludeNotTargetedItems="false" FilterUsage="PersistentOnly" TranslateTaxonomyTerms="false"
  IgnoreNotExistingColumnFilters="true" xmlns:p3="http://www.w3.org/2001/XMLSchema-instance">
  <CachingSettings EnableCaching="false" Timeout="10" ExpireOnSPChange="false"
    ForceTimeoutExpiration="false" />
- <SearchScope SearchScopeType="Webs">
  <Web WebApplicationId="a77a7509-1913-4231-9870-a5b0bdf9595c" SiteCollectionId="29f3fc5a-
    d330-4169-aa2e-0985c6293f68" Id="#CurrentWebId#" ServerRelativeUrl="/sites/LT/LCWP"
    IncludeSubWebs="false" RollupFromItself="true" />
  </SearchScope>
  <ListType Id="101" Type="DocumentLibrary" />
  <ContentType Name="All Content Types" Id="-1" Group="" IncludeChildContentTypes="false" />
  <AmountOfItemsReturned>-1</AmountOfItemsReturned>
</Settings>
</DataSourceProviderConfiguration>
</Configuration>
```

4. Programmatically modify the configuration of the LCWP using data from the saved xml file. First in your Visual Studio project, add a reference to the Lightning Conductor Web Part :

c:\Windows\Microsoft.NET\assembly\GAC_MSIL\LightningTools.WebParts.LCWP\

v4.0_1.0.0.0__3c1c941f3875b35a\LightningTools.WebParts.LCWP.dll Then add code to modify the LCWP configuration, which will be similar to the following code:

```
// retrieve 4 (WebPart, Common, RollupEngineEngineProvider and DisplayProvider)
// configuration parts from configuration xml
XElement configXml = XElement.Parse(File.ReadAllText("C:\\LCWPConfig.xml"));
XElement wpConfigElement = configXml.Element(XName.Get("WebPartConfiguration"));
XElement commonConfigElement = configXml.Element(XName.Get("CommonConfiguration"));
XElement rollupConfigElement =
  configXml.Element(XName.Get("RollupEngineProviderConfiguration"));
XElement displayConfigElement = configXml.Element(XName.Get("DisplayProviderConfiguration"));

// change the names of root element to "Configuration"
wpConfigElement.Name = XName.Get("Configuration");
commonConfigElement.Name = XName.Get("Configuration");
rollupConfigElement.Name = XName.Get("Configuration");
displayConfigElement.Name = XName.Get("Configuration");
```



```
// In our scenario, the LCWP that we want to configure programmatically is located
// on the page http://sp2013ara/SitePages/LCWPPage.aspx
using (SPSite site = new SPSite("http://sp2013ara"))
using (SPWeb web = site.OpenWeb())
using (SPLimitedWebPartManager wpMgr =
    web.GetLimitedWebPartManager("SitePages/LCWPPage.aspx", PersonalizationScope.Shared))

using (wpMgr.Web)
{
    //get LCWP using web part manager of that page
    LightningConductor2010WebPart lcwp =
        wpMgr.WebParts [0] as LightningConductor2010WebPart;

    //set LCWP properties
    lcwp.strWebPartConfiguration = wpConfigElement.ToString();
    lcwp.strCommonConfiguration = commonConfigElement.ToString();
    lcwp.strRollupEngineProviderConfiguration = rollupConfigElement.ToString();
    lcwp.strDisplayProviderConfiguration = displayConfigElement.ToString();
    lcwp.strConfigurationVersion = "3.1.0.0"; //LCWP current version

    //update LCWP
    wpMgr.SaveChanges(lcwp);
}
```


Troubleshooting

This section contains issues that may be experienced when installing the [Lightning Conductor Web Part](#) for [Microsoft® SharePoint® 2013](#).

SharePoint 2013 Central Administration Web Site:

The following errors are related to tasks that are completed using the SharePoint 2013 Central Administration web site.

- Missing: [Manage Lightning Tools Products Licensing link](#) on the **System Settings** page.
- Missing: [Lightningconductor2013webpart.wsp solution](#) on the **Solution Management** page.
- [Licensing Error](#)

SharePoint sites:

The following errors are related to tasks an information worker, site owner or site collection administrator may see.

- Missing: [Lightning Conductor Web Part site collection feature](#).
- Missing: [Lightning Tools Web Parts category](#) in the Web Part pane.
- Missing: [Lightning Conductor Web Part](#) in the Web Part pane.

Statistical Information

For performance testing purposes, you can display details on the data retrieving process of the [Lightning Conductor Web Part](#). To display this statistical information at the top of the Web Part, on the [Web Part tab](#) of the [Configuring Lightning Conductor Web Part dialog](#), select the **Configure Statistical Information** check box.

Lightning Conductor ☒

View ▸ All Tasks ▾

Statistic Information

Current Rollup		
rollup duration:	495	ms
items retrieving duration:	493	ms
items converting duration:	1	ms
total lists:	1	
total items:	5	
Previous Rollups		
rollup duration average:	495	ms
items retrieving duration average:	493	ms
items converting duration average:	1	ms
total rollups:	1	
Rollup Performance Indicator: 0.01		
assembly file version:	1.0.0.0	
data format:	DataTable	
server name:	SP2013	
date:	05/02/2013	
time:	12:59:42	

Licensing Error

Symptom:

When you try to activate the license for the [Lightning Conductor Web Part](#), a dialog box is displayed with a title: Licensing Error. In the **Inner Error #1** section, the description is **The remote name could not be resolved: 'register.lightningtools.com'**. You may have to scroll down the dialog box, to see the **Inner Error #1** section.

Licensing Error



Error Information

Correlation ID: db3f689c-2cfe-70bb-eaad-396f561ca00c



Error occurred during operation

Description: There was no endpoint listening at https://register.lightningtools.com/ActivationService.svc that could accept the message. This is often caused by an incorrect address or SOAP action. See InnerException, if present, for more details.

Date: 1/8/2014 12:26 PM

Method: Void HandleReturnMessage(System.Runtime.Remoting.Messaging IMessage, System.Runtime.Remoting.Messaging IMessage)

Type: System.Runtime.Remoting.Proxies.RealProxy

Source: mscorlib, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089

Exception Type: System.ServiceModel.EndpointNotFoundException

Stack Trace: Server stack trace: at System.ServiceModel.Channels.HttpOutput.WebRequestHttpOutput.GetOutputStream() at System.ServiceModel.Channels.HttpOutput.Send(TimeSpan timeout) at System.ServiceModel.Channels.HttpChannelFactory`1.HttpRequestChannel.HttpChannelRequest.SendRequest(Message message, TimeSpan timeout) at System.ServiceModel.Channels.RequestChannel.Request(Message message, TimeSpan timeout) at System.ServiceModel.Channels.ServiceChannel.Call(String action, Boolean oneway, ProxyOperationRuntime operation, Object[] ins, Object[] outs, TimeSpan timeout) at System.ServiceModel.Channels.ServiceChannelProxy.InvokeService(IMethodCallMessage methodCall, ProxyOperationRuntime operation) at System.ServiceModel.Channels.ServiceChannelProxy.Invoke(IMessage message) Exception rethrown at [0]: at System.Runtime.Remoting.Proxies.RealProxy.HandleReturnMessage(IMessage reqMsg, IMessage retMsg) at System.Runtime.Remoting.Proxies.RealProxy.PrivateInvoke(MessageData& msgData, Int32 type) at LightningTools.Licensing.SP2013LicensingManager.LTLicensingService.IActivationService.DoActivate(String regkey, String userIdentity, String productName, String organization, String userName, String userEmail) at LightningTools.Licensing.SP2013LicensingManager.LicensingManager.p(String A_0, String A_1, String A_2, String A_3) at LightningTools.Licensing.Controls.LicenseActivation.ButtonActivate_Click(Object sender, EventArgs e)

Inner Error #1

Description: The remote name could not be resolved: 'register.lightningtools.com'

Method: System.IO.Stream GetRequestStream(System.Net.TransportContext byRef)

Type: System.Net.HttpWebRequest

Source: System, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089

Exception Type: System.Net.WebException

Stack Trace: at System.Net.HttpWebRequest.GetRequestStream(TransportContext& context) at System.Net.HttpWebRequest.GetRequestStream() at System.ServiceModel.Channels.HttpOutput.WebRequestHttpOutput.GetOutputStream()

Resolution:

This Inner Error description is displayed when your SharePoint server does not have Internet access, use the [Manual Activate](#) method of activating your license key.

Missing: Lightningconductor2013webpart.wsp solution

Symptom:

On the **Solutions Management** page of the SharePoint 2013 Central Administration web site, the Lightningconductor2013webpart.wsp – solution is missing.

Resolution:

Upload the Lightning Conductor solution package using [Add-SPSolution](#) Windows PowerShell® command.

Missing: Manage Lightning Tools Product Licencing link

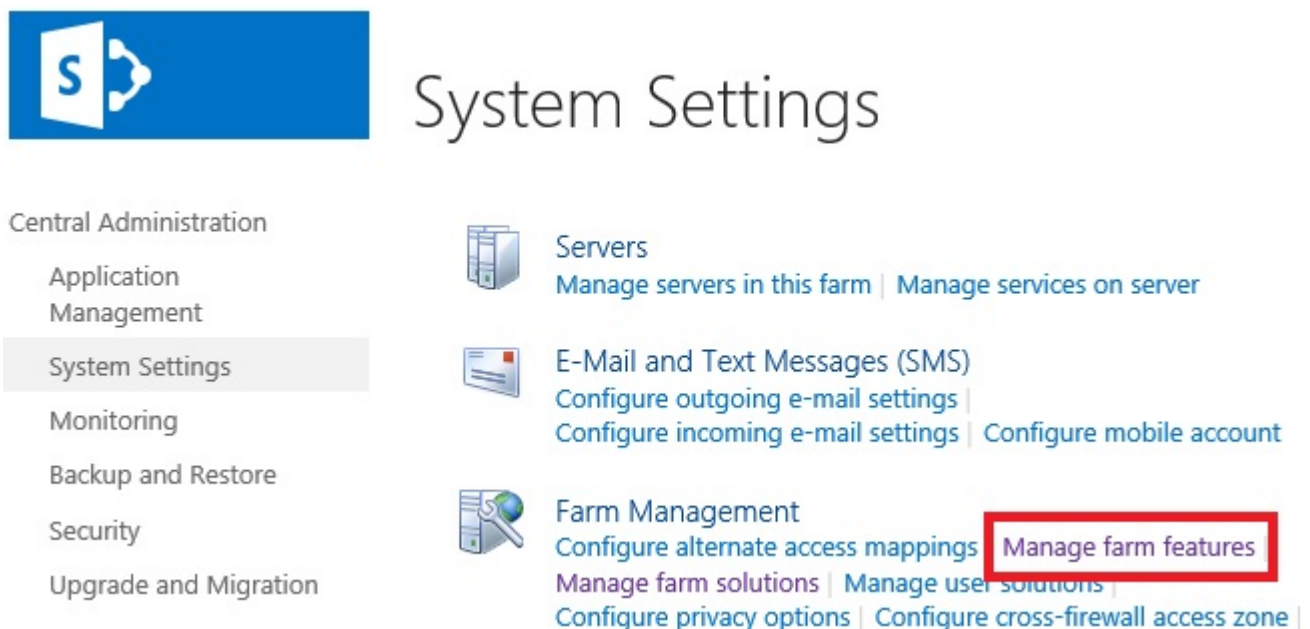
Symptom:

On the **System Settings** page of the SharePoint 2013 Central Administration web site, under **Farm Management**, the link – **Manage Lightning Tools products licencing** – is missing.





Resolution:

Activate the Manage Licensing Of Lightning Conductor farm feature using the following steps:

1. In the browser, on the Quick Launch of the Microsoft SharePoint Central Administration web site, click **System Settings**, and then under **Farm Management**, click **Manage farm features**.



2. On the **Manage Farm Features** page, to the right of **Manage licensing of Lightning Conductor** click **Activate**.

	Excel Services Application Web Part Farm Feature Adds farm-level Excel Services Application web part features to the Microsoft SharePoint Foundation framework	Deactivate	Active
	Farm Level Exchange Tasks Sync Enables the Exchange Sync Timer Job for Work Management Service Application. Customizes the ribbon for SharePoint Server Tasks lists, enabling users to opt in and out of the Work Management synchronization with Exchange Server.	Deactivate	Active
	Global Web Parts Installs additional web parts common to all types of sites.	Deactivate	Active
	Manage licensing of Lightning Conductor Adds links in central administration for managing LT products licensing.	Activate	

Missing: Lightning Tools Web Parts category in the Web Part pane

Symptom:

When trying to add the [Lightning Conductor Web Part](#) to a [Microsoft® SharePoint® 2013](#) page, the Lightning Tools Web Parts category does not appear in the Web Part pane.

Resolution:

[Activate the Lightning Conductor Web Part](#) at the site collection level.

Missing: Lightning Conductor Web Part in the Web Part pane

Symptom:

When trying to add the [Lightning Conductor Web Part](#) to a [Microsoft® SharePoint® 2013](#) page, the Lightning Conductor Web Part does not appear in the Web Part pane.

Resolution:

[Activate the Lightning Conductor Web Part](#) at the site collection level.

Missing: Lightning Conductor Web Part site collection feature

Symptom:

When trying to activate the **Lightning Conductor Web Part** site collection feature, it is not listed on the **Site Collection Features** page.

Resolution:

[Deploy the Lightning Conductor solution](#) to the Web application where the site collection lives.

Lightning Conductor 2013 V2.1.0.0

Improvements

This page contains information of the changes that are incorporated in Lightning Conductor Web Part 2013 version 2.1.0.0

In 2.0.0.1 hotfix:

1. Ability to expand/collapse groups by clicking on group header.
2. User Presence formatting option for user fields.
3. Configurable ability to show count of items in each group.
4. Fixed the bug related to handling audience targeting.

In 2.0.0.2 hotfix:

1. Optimized license checking process.
2. Applied German translation fixes.

In 2.0.0.3 hotfix:

1. Fixes issues in SP Foundation.
2. Fixed draft items visibility issue in caching engine when using XSL Style display provider and SPSiteDataQuery rollup engine provider.
3. Fixed caching engine "Null reference exception" issue.

In 2.0.0.4 hotfix:

1. Fixed "Parent Web Title" and "Parent List Title" fields not displaying issue for SPSiteDataQuery engine and when caching engine is enabled.
2. Added en-GB and en-AU resource files to wsp package.
3. Added "Hyperlink (New Window)" formatting option.
4. Added ability to render display control after data retrieving error.

Changes that were not included in hotfixes:

1. [Calculated columns](#) functionality.

2. Ability to not show grouping columns as grid view column.
3. For choice fields display available values (in drop down) when configuring filtering or conditional formatting for that field.
4. Ability (for non farm admins) to add additional [accessible site collections](#) (by providing site collection url) to rollup source selection tree view.
5. Enhancement in JSON style display provider to specify rendering JS function name.
6. Include XSL style transformation duration in displayed statistic information for xsl style display provider.
7. “No Extension” formatting option for file name column.
8. Limited size of icons displayed in rollup source tree view.
9. Some style changes in configure conditional formatting dialog (tooltip for “Add Formatting” button, different background color for new criteria filling row, after adding new condition row clear values filled in controls of new criteria row) .
10. Ability to display document locked state in document type icon.
11. Filter by “All Tags” similar to CQWP.

Lightning Conductor 2013 v3.0 Improvements

Lightning Conductor 2013 version 3.0, included the following new functionality:

- Four new Web Parts are included that are configured with preset rollups: Announcements Rollup, Documents Rollup, Events Rollup and Tasks Rollup.
- View some details about rollup error source, such as, site id and list id.
- Ability to configure conditional formatting based on values from several columns.
- Ability to detect URLs and emails when using the [SPGridView Display Provider](#) and render them as hyperlinks.
- When the page is refreshed the Lightning Conductor Web Part displays the same view that was displayed prior to the refresh.
- Ability to display a summary rows when using the [SPGridView Display Provider](#).
- Issue fixed which related to selecting multiple nodes in another site collection sub tree.
- Japanese resource files included.
- New [Upgrade](#) process. If you previously installed Lightning Conductor 2013 v2, in addition to updating the Lightning Conductor 2013 SharePoint farm solution, so that the new preconfigured Lightning Conductor rollup Web Parts are loaded into the Web Part gallery, you need to deactivate and then [activate the Lightning Conductor Web Part site collection feature](#) on site collections that use the Lightning Conductor Web Part.