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# ComponentOne SharePoint Web Parts User Guide





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# ComponentOne SharePoint Web Parts

ComponentOne offers three Silverlight™-enabled Web Parts, giving you the ability to create rich, interactive SharePoint sites.

- [C1Maps](#): on page 45      Display Microsoft Bing™ Maps, complete with your own annotations retrieved from your SharePoint list, SQL Server® table, Excel® file, or Oracle® database in a variety of different views using the C1Maps Web Part.
- [C1DataGrid](#): on page 63      Display hierarchical data and create an interactive grid that retrieves data from your SharePoint list, SQL Server table, Excel file, or Oracle database using the C1DataGrid Web Part.
- [C1Chart](#): on page 79      Choose from thirty eye-catching charts and a variety of themes and color palettes to display a series of values retrieved from your SharePoint list, SQL Server table, Excel file, or Oracle database using the fully customizable C1Chart Web Part.

## Installing ComponentOne SharePoint Web Parts

The following sections provide helpful information on installing ComponentOne SharePoint Web Parts and are normally performed by the SharePoint administrator.

### ComponentOne SharePoint Web Parts Setup Files

The installation program will by default create the following directory: **C:\Program Files\ComponentOne\C1WebParts**.

- bin**      Contains the SharePoint solution file C1WebParts.wsp; the Silverlight cross-domain policy .xml files, clientaccesspolicy.xml and crossdomain.xml; and the C1WebPartInstaller.exe.
- Help**      Contains documentation for ComponentOne SharePoint Web Parts.

# ComponentOne SharePoint Web Parts System Requirements

System requirements include the following:

<b>Operating Systems:</b>	Microsoft Windows Server® 2003 Microsoft Windows Server 2008
<b>Server:</b>	Microsoft Windows SharePoint Services (WSS) 3.0
<b>Software:</b>	.NET Framework 3.5 Service Pack 1 Silverlight™ 3 runtime (Silverlight required for client only)

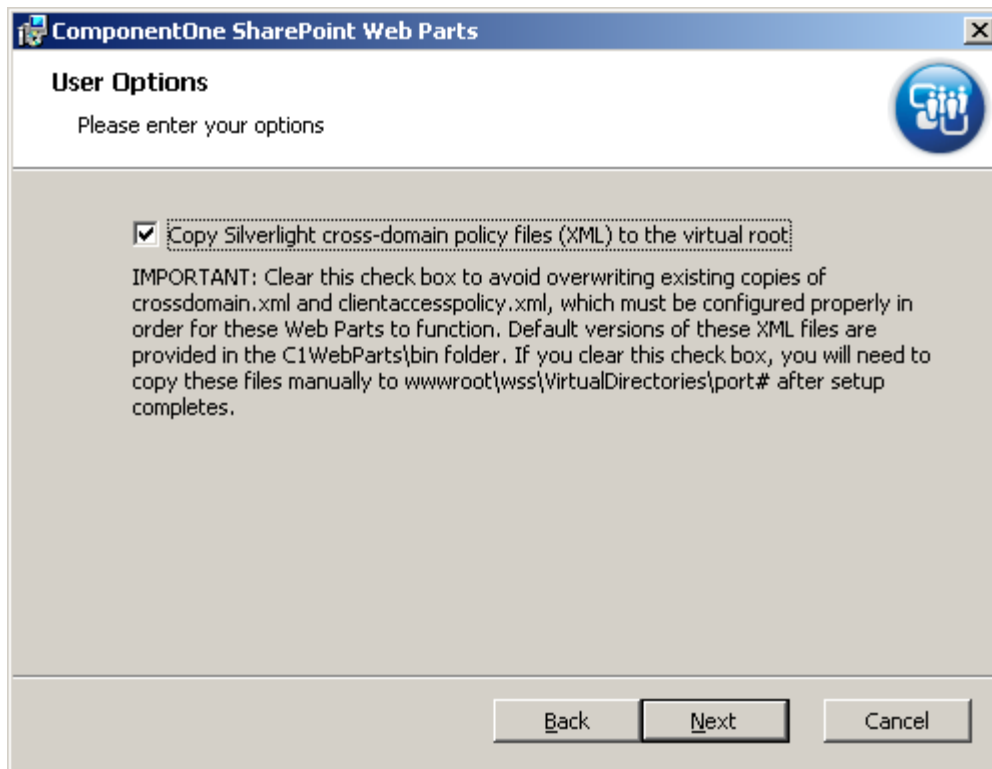
## Installation

The setup wizard will guide you through the process of installing ComponentOne SharePoint Web Parts.

1. Double-click the installation file; the setup wizard will open.

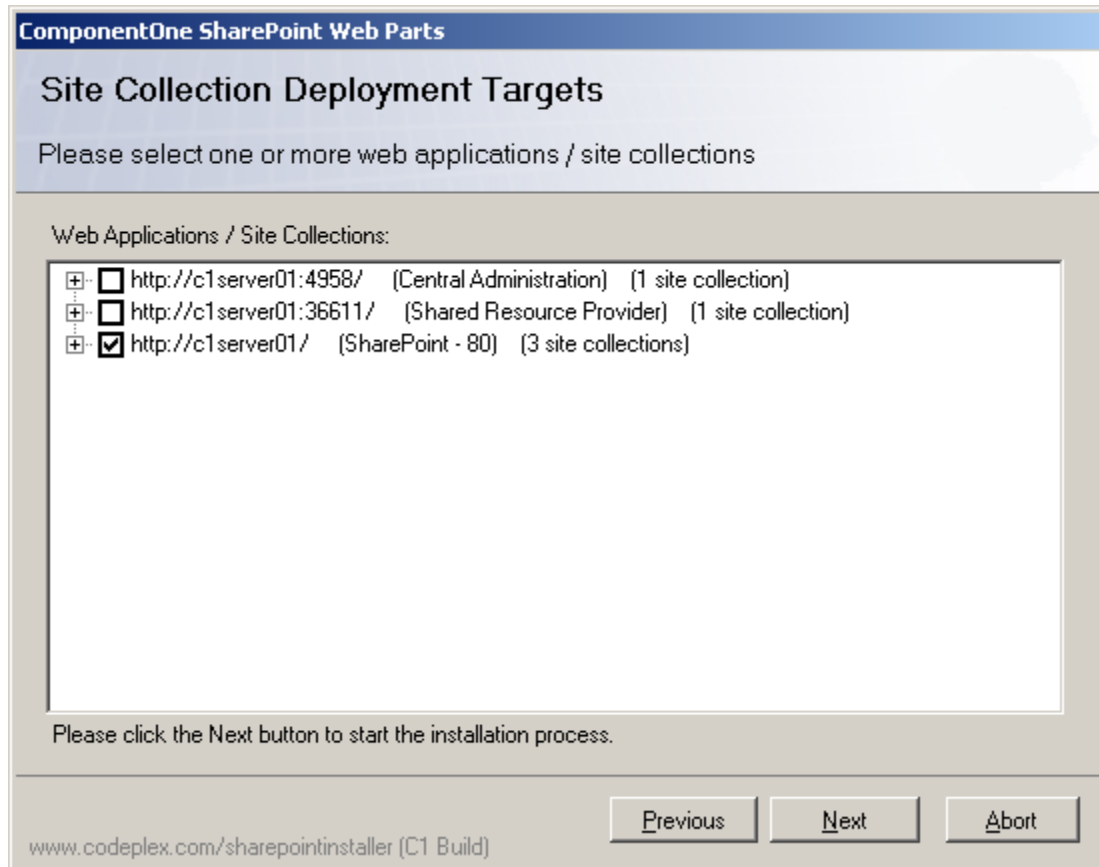
**Note:** If you are installing the ComponentOne Web Parts to a SharePoint farm, please make sure that you run the installer from your Application Server.

2. Click **Next** to confirm that you have everything that you need installed on the **Dependency Check** screen.
3. If a red 'X' appears next to an item, indicating that you need to install the required element, select **Cancel** and install the required dependency before resuming installation. If a green check appears next to each element, indicating that you have everything required installed, click **Next** to select your options on the **User Options** screen.
4. In the **User Options** screen, check the **Copy Silverlight cross-domain policy files (XML) to virtual root** checkbox, and the setup wizard will copy the XML files from the **ComponentOne\C1WebParts\bin** directory to **Inetpub\wwwroot\wss\VirtualDirectories\80**.



**Note:** As explained on Microsoft's Silverlight Web site, Silverlight-based applications can either make calls back to their origin server or optionally make cross-domain calls. To enable cross-domain access on a service, it must provide a Clientaccesspolicy.xml or Crossdomain.xml at the root of the domain. Therefore, these files have been provided for you as part of the ComponentOne SharePoint Web Parts installation and can be automatically placed at the root of your site. With these files in place, authorized users will have direct access to your SharePoint list data without seeing a security warning. For additional information on Silverlight communications, visit <http://www.silverlight.net>.

5. Click **Next** to continue. The **Site Collection Deployment Targets** screen appears.



**Note:** For server farm installations only, the Web Parts must be installed to the Central Administration site in order for licensing to work correctly.

6. Select one or more Web applications or site collections.
7. Click **Next** to continue.
8. Select the check box to accept the end-user license agreement and click **Next**.
9. Select an install location or accept the default installation directory of **C:\Program Files\ComponentOne\C1WebParts** and then click **Next** to continue.
10. Click **Install** to complete the installation process.
11. Click **Finish** to complete the installation process and close the setup wizard. After the installation process is complete, you will be prompted to verify your Internet Information Service (IIS) Authentication settings. Instructions are available from the install, and are provided here in the event you need to check them at a later date.

## Verifying and Changing Your Internet Information Services (IIS) Authentication Settings

### How to verify your authentication settings

1. Open the **SharePoint Central Administration** page (Click **Start** > **All Programs** > **Administrative Tools**, and then click **SharePoint Central Administration**.)
2. Go to **Application Management** and click on **authentication providers** under the **Application Security** heading.
3. Confirm that the correct web application is selected. If it is not, click the web application and select it.
4. Click on **default** under the zone.
5. Check the **IIS authentication settings** – they will either be **Negotiate** (Kerberos) or **NTLM**. If the settings are not **NTLM**, change them to **NTLM** using the instructions below.

### How to change the configuration file if you are using NTLM

Go to **C:\inetpub\wwwroot\wss\VirtualDirectories\80\resources\C1WebServices**

- Replace **80** with the port you are using (if it is not port 80)

If you are using HTTPs you also need to make this change in

**C:\inetpub\wwwroot\wss\VirtualDirectories\80\resources\C1SecureWebServices:**

1. Open the web.configuration file.
2. Locate the following line: `<transport clientCredentialType="Windows" />`
3. Change it to `<transport clientCredentialType="Ntlm" />` — Do this carefully because the **NTLM** is case sensitive and must be written in exactly this format.



## Activating ComponentOne Licensing

The ComponentOne Web Parts trial period begins when the product is installed, and it is available for 30 days. Prior to the end of the trial, you must activate the Web Parts in order to continue using them. If you have installed the trial version and then purchased a Web Part, follow these steps in order to activate it:

1. Click the **Start** menu, select **All Programs | ComponentOne SharePoint Web Parts**, and choose **License Activation**. The **Activate License** dialog box appears.

**Activate License**

ComponentOne  
License Activation

**User Name:**

**Company:**

**Serial Number:**

You can activate your license automatically over the Internet.  
No personal information will be transferred.

If you would rather activate your license manually, please select  
the method you prefer, then click OK to proceed:

Automatically over the Internet

From our web site

By e-mail

Over the phone

If you don't have a serial number, click Cancel and the product  
will be installed as a 30-day trial version.

[Activation Help](#)

2. In the **Activate License** dialog box:
  - a. Enter your name in the **User Name** text box.
  - b. Enter your company name in the **Company** dialog box.
  - c. Enter the serial number you received when you purchased the product in the **Serial Number** text box.
  - d. Select an activation method:

**Automatically over the Internet**

This is the default method. If you have an Internet connection, the Web Part will be automatically activated.

**From our web site**

The activation wizard will give you an authentication number. Browse to <http://c1verification.componentone.com/webfiles/Activate.aspx> and enter your serial number and authentication number to receive an Activation Code.

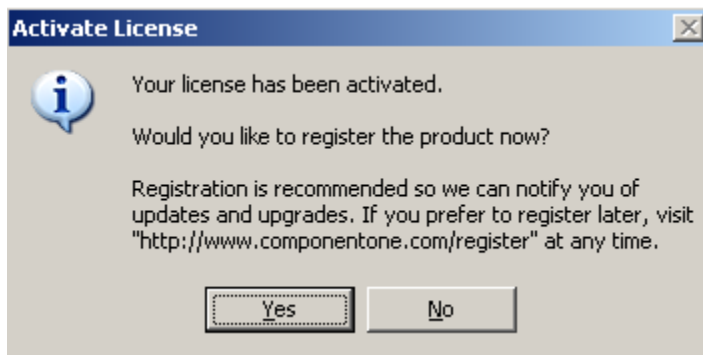
**By e-mail**

The activation wizard will give you an authentication number. Email your serial number and authentication number to [activate@componentone.com](mailto:activate@componentone.com) and a customer service representative will provide you with an Activation Code.

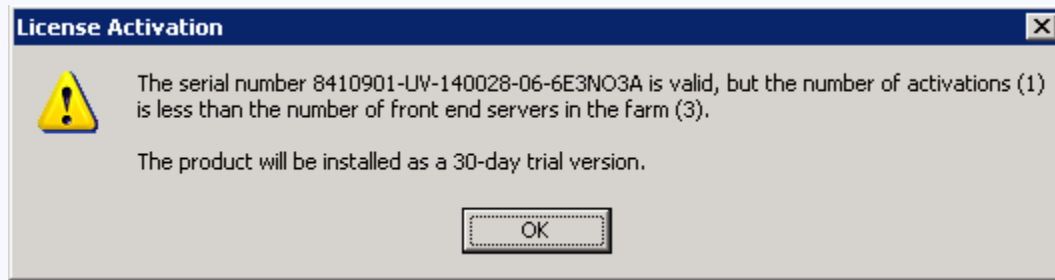
**Over the phone**

The activation wizard will give you an authentication number. Call the Activation hotline at 866.379.0274 (U.S. and Canada) or 412.681.0711 (International) 9:00 a.m. to 5:00 p.m. EST Monday through Friday, provide your serial and authentication numbers, and a customer service representative will provide you with an Activation Code.

- e. Click **Next** and follow the steps in the **Activate License** dialog box to receive an Activation Code. Note that if you activate **Automatically over the Internet**, you do not have to do anything else and the process is complete. If you choose another method, click **Next** again to continue.
3. Once the license is activated, the dialog box will ask if you want to register the product. Click **Yes** or **No**; however, we recommend clicking **Yes** so we can notify you of product updates and upgrades.



**Note:** If you try to activate on a farm that has more web front end (WFE) servers than you have licenses for, the following dialog box appears.

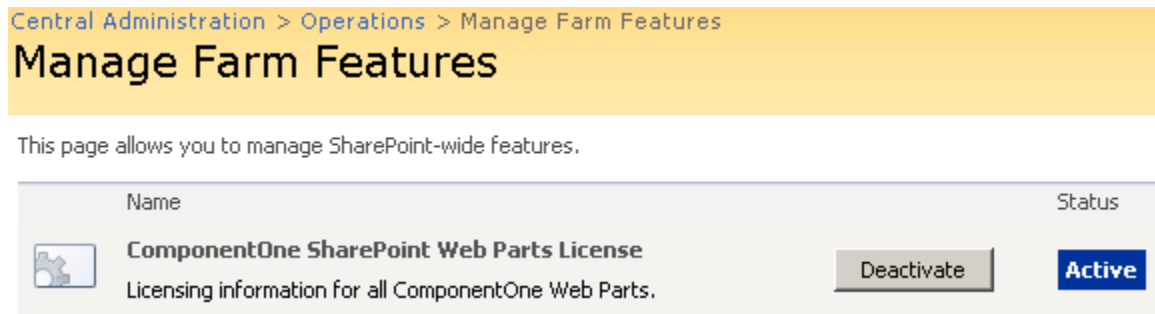


For additional information on activating ComponentOne products, visit <https://c1verification.componentone.com/webfiles>.

## Activating the ComponentOne SharePoint Web Parts License Feature

In order to activate ComponentOne licensing, the ComponentOne SharePoint Web Parts License feature must be active. It is active by default; however, if you must activate it manually, you can do so by following the steps below.

1. Click the **Start** menu, select **Administrative Tools**, and choose **SharePoint 3.0 Central Administration**.
2. In the **Central Administration** application, click the **Operations** tab.
3. Under **Global Configuration**, select **Manage farm features**.
4. Make sure **ComponentOne SharePoint Web Parts License** feature has an **Active** status as in the following example.



If it is not active, click the **Activate** button. Note that this does not license the Web Part for use in your SharePoint site; it only activates the licensing feature. Once the licensing feature is activated, the Web Part will still need to be licensed. See [Activating ComponentOne Web Parts](#) on page 15 for information.

## Deactivating ComponentOne Licensing

If you need to deactivate ComponentOne licensing for any reason, click the **Start** menu, select **All Programs | ComponentOne SharePoint Web Parts**, and choose **License Deactivation**.

## Uninstalling ComponentOne SharePoint Web Parts

To uninstall ComponentOne SharePoint Web Parts, complete the following steps:

1. Open the Control Panel and select **Add or Remove Programs**.
2. Select **ComponentOne SharePoint Web Parts** and click the **Remove** button.
3. Click **Yes** to remove the program.

## Viewing ComponentOne SharePoint Web Parts

In order to view ComponentOne Web Parts in SharePoint, one of the following must be true:

1. Users must be a member of the WSS\_WPG group on the Windows server. Note that administrators who already belong to the WSS\_ADMIN\_WPG group do not need to be added to the WSS\_WPG group.

OR

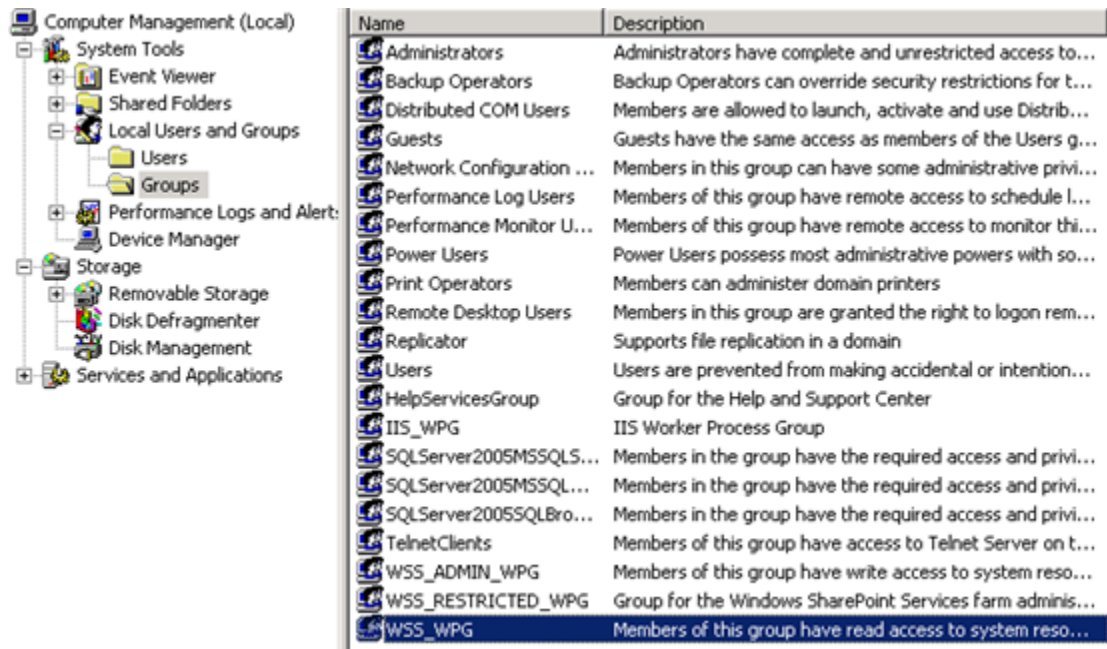
2. Users must have **Read & Execute** permissions on the folder where ComponentOne Web Parts are deployed.

Additionally, users must have **Contribute** permission or greater on the SharePoint site. That is, they must belong to the Home Members or Home Owners group on the SharePoint site, where Home is the name of the site.

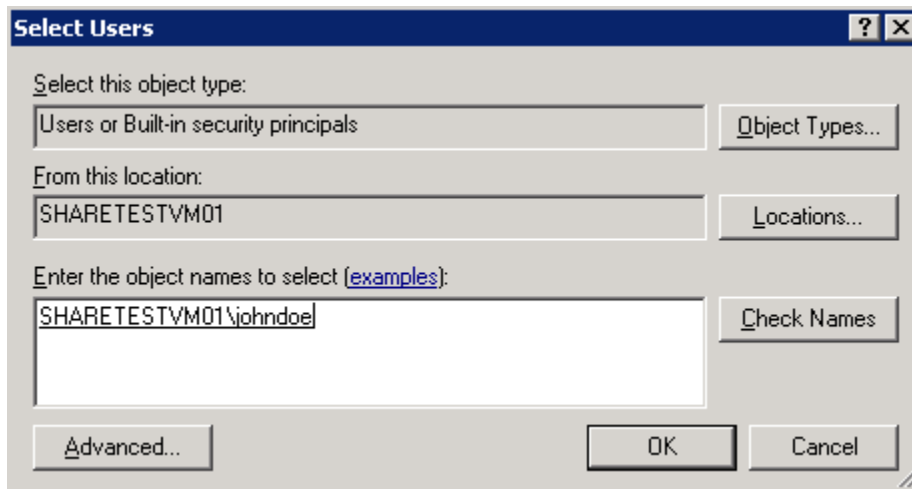
**Note:** If a user is a member of the Home Visitors group, they are only granted read permission and, therefore, have limited functionality. Home Visitors can modify Web Part properties but cannot save them. Additionally, Home Visitors do not have permission to browse subsites in SharePoint, so subsites will not be accessible in the **Data Source** tab of the Web Parts On-Board Designer. However, SharePoint administrators can change the default SharePoint permissions of the user groups.

To add a user to the WSS\_WPG group, complete the following steps:

1. Select **Start | Administrative Tools | Computer Management**.
2. In the **Computer Management** pane on the left, expand **System Tools, Local Users and Groups**, and select **Groups**.
3. In the right pane, right click **WSS\_WPG** and select properties.



4. In the **WSS\_WPG Properties** dialog box, click **Add**. The **Select Users** dialog box appears.
5. Under **Enter the object names to select**, enter a user name. You can follow any of the syntax examples below and you can also enter a group name:
  - DisplayName (example: FirstName LastName)
  - ObjectName (example: Computer1)
  - UserName (example: User1)
  - ObjectName@DomainName (example: User1@Domain1)
  - DomainName\ObjectName (example: Domain1\User1)
6. Click the **Check Names** button to find the user or group, which will appear in the text box once it is located.



7. Click **OK**, and you will notice the user or group now appears in the **Members** list in the **WSS\_WPG Properties** dialog box.
8. Click **OK** again to close the dialog box. The user or group will now be able to view ComponentOne Web Parts.

**To add a user to the Home Members, Home Owners, or Home Visitors group in SharePoint, complete the following steps:**

1. Open your SharePoint site, and click the **Site Actions** menu.
2. Select **Site Settings** and then choose **People and Groups**.
3. Select **Home Members** or **Home Owners** from the list of **Groups** on the left side of the page.
4. Select **New | Add Users**.
5. Enter the name of the user in the **Users/Groups** text box.

In the **Give Permission** drop-down list, **Home Member [Contribute]**, **Home Owners [Full Control]**, or **Home Visitors [Read]** will be selected. You can change the selection as needed.

You can also choose to **Give users permission directly**. Select the control option for the user here. Users must have **Contribute** permission or greater in order to edit ComponentOne Web Parts.

6. Click **OK** to add the user to the group.

# Technical Support

ComponentOne offers various support options. For a complete list and a description of each, visit the ComponentOne Web site at <http://www.componentone.com/Support>.

Some methods for obtaining technical support include:

- **Online Support via [HelpCentral](#)**  
ComponentOne HelpCentral provides customers with a comprehensive set of technical resources in the form of [FAQs](#), [samples](#), [Version Release History](#), [Articles](#), searchable [Knowledge Base](#), searchable [Online Help](#) and more. We recommend this as the first place to look for answers to your technical questions.
- **Online Support via our Incident Submission Form**  
This online support service provides you with direct access to our Technical Support staff via an [online incident submission form](#). When you submit an incident, you'll immediately receive a response via e-mail confirming that you've successfully created an incident. This email will provide you with an Issue Reference ID and will provide you with a set of possible answers to your question from our Knowledgebase. You will receive a response from one of the ComponentOne staff members via e-mail in 2 business days or less.
- **Peer-to-Peer Product Forums and Newsgroups**  
ComponentOne peer-to-peer product [forums and newsgroups](#) are available to exchange information, tips, and techniques regarding ComponentOne products. ComponentOne sponsors these areas as a forum for users to share information. While ComponentOne does not provide direct support in the forums and newsgroups, we periodically monitor them to ensure accuracy of information and provide comments when appropriate. Please note that a ComponentOne User Account is required to participate in the ComponentOne Product Forums.
- **Installation Issues**  
Registered users can obtain help with problems installing ComponentOne products. Contact technical support by using the online incident submission form or by phone (412.681.4738). Please note that this does not include issues related to distributing a product to end-users in an application.
- **Documentation**  
ComponentOne documentation is available with each of our products in HTML Help, Microsoft Help 2.0 (WPF, .NET, ASP.NET and Mobile Device products only), and NetHelp format. The NetHelp version of the documentation is also available on [HelpCentral](#). If you have suggestions on how we can improve our documentation, please email the [Documentation team](#). Please note that e-mail sent to the [Documentation team](#) is for documentation feedback only. [Technical Support](#) and [Sales](#) issues should be sent directly to their respective departments.

**Note:** You must create a ComponentOne Account and register your product with a valid serial number to obtain support using some of the above methods.

## End-User License Agreement

All of the ComponentOne licensing information, including the ComponentOne end-user license agreements, frequently asked licensing questions, and the ComponentOne licensing model, is available online at <http://www.componentone.com/SuperPages/Licensing/>.

# About this Documentation

## Acknowledgements

Microsoft, Windows, Windows Server, SQL Server, Silverlight, Virtual Earth, Bing Maps, Excel, and SharePoint are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Oracle is a registered trademark of Oracle Corporation.

## ComponentOne

If you have any suggestions or ideas for new features or controls, please call us or write:

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## ComponentOne Doc-To-Help

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# Key Features

The following features are available to all of the ComponentOne SharePoint Web Parts:

- Choose Microsoft SharePoint lists, SQL Server® tables or views, Excel® files, or Oracle® databases as your data source

ComponentOne Web Parts give you the option of using four different data sources for any of your Web Parts. See [Using a SharePoint List Data Source](#) on page 23, [Using a SQL Server Table Data Source](#) on page 25, [Using an Excel File Data Source](#) on page 28, and [Using an Oracle Data Source](#) on page 30 for more information.

- Sort and filter SharePoint lists, SQL Server tables or views, Excel files, or Oracle databases

ComponentOne Web Parts allow you to sort and filter the table/view you choose as your data source. Sorting and filtering is performed on the server. For more information, see [Sorting and Filtering Lists and Tables](#) on page 34.

- Prevent unauthorized users from editing ComponentOne Web Parts. For more information, see [Setting Properties Using the C1 Web Part Appearance Tab](#) on page 20.
- Create data connections between your ComponentOne Web Parts, as well as between ComponentOne Web Parts and SharePoint WebParts. See [Creating Connections between C1 Web Parts](#) on page 37 and [Connecting ComponentOne Web Parts to SharePoint Web Parts](#) on page 42.

The following features are specific to each of the individual Web Parts.

## C1Maps Web Part Features

- Choose from three Microsoft Bing™ Maps displays

Select from Bing Maps Aerial, Bing Maps Road, or Bing Maps Hybrid display. For an example of each, see [Setting the Initial Map Display](#) on page 46.

- Add customized annotations to enhance your map

You can set the style, behavior, type, and zoom factor for your annotations. See [Formatting Annotations](#) on page 51 for more information.

- Use geocoding to obtain geographic coordinates using street addresses, zip codes, etc. See [Setting the C1Maps Geocode](#) on page 49.
- Add custom code to customize your map. See [C1Maps Event Handlers](#) on page 53.

## C1DataGrid Web Part Features

- Provide users with an interactive grid

Users can move, filter, and sort columns; edit data; and resize rows and columns with the C1DataGrid Web Part. See [C1DataGrid Web Part](#) on page 63 for instructions.

- Display hierarchical data

The C1DataGrid Web Part supports automatic hierarchical data representation. In other words, you can specify a master, or parent, table that is linked by key fields to a detail, or child, table. When master-detail view is enabled, you can click the drop-down arrow in the row's record selector column to see the detail view. See [Displaying a Hierarchical Grid](#) on page 65 for more information.

### **C1Chart Web Part Features**

- Choose from 30 available chart types  
Choose from the standard chart types (bar, line, pie, bubble, and more) or select a more advanced chart type such as the doughnut or radar chart. For a list and description of available charts, see [C1Chart Types](#) on page 81.
- Choose from 14 built-in themes for easy customization  
Customize the appearance of your chart with built-in Office 2007, Vista, and Office 2003 themes. See [C1Chart Themes](#) on page 83 for an example of each theme.
- Choose from 23 palette options to color your grid  
Choose from 23 palette options to define the colors of your chart and legend items. See [C1Chart Palette](#) on page 90 for an example of each option.
- Easily create a fully customizable chart  
The C1Chart Web Part is fully customizable. Not only can you change the chart type and colors, but you can: add labels, rotate axis annotations, configure axis units, change the position and layout of the legend, and even add notes to your chart. For more information, see [C1Chart Web Part](#) on page 79.

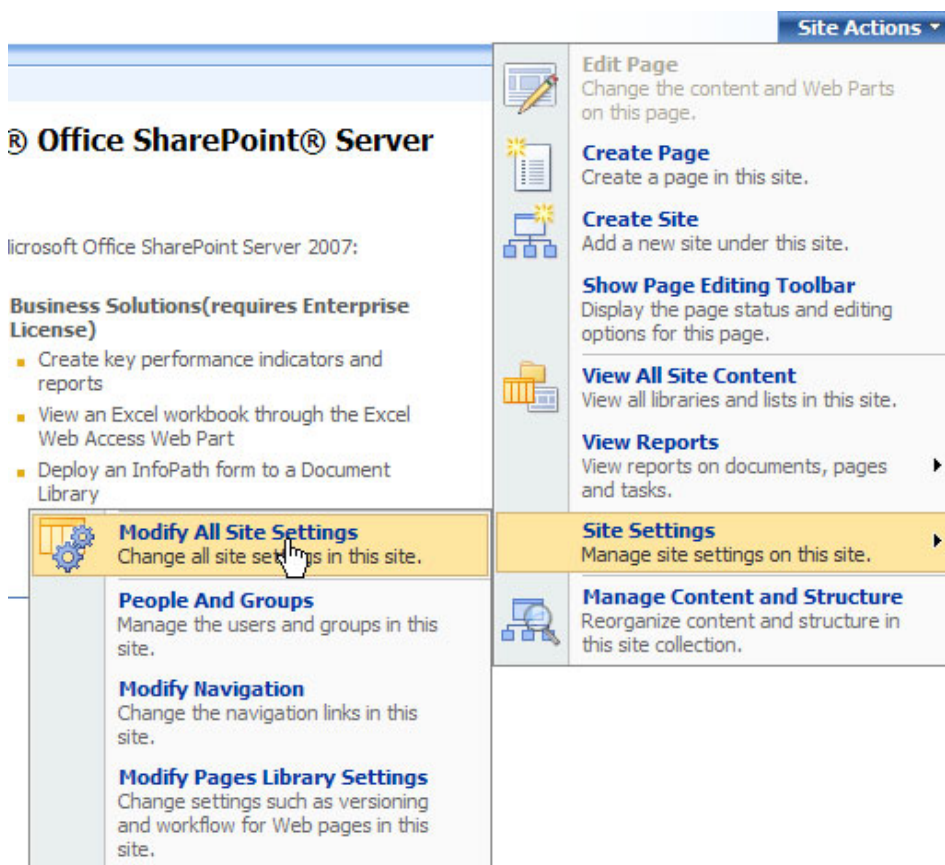
# Using ComponentOne Web Parts

The following topics explain how to perform tasks that are common to all ComponentOne SharePoint Web Parts, including: activating ComponentOne licensing, activating the Web Parts, adding to a page in your site, accessing properties, resizing, importing and exporting, and using data sources.

## Activating ComponentOne Web Parts

During installation, the ComponentOne SharePoint Web Parts are automatically activated so they can be added to your SharePoint site. If you need to activate ComponentOne Web Parts manually, complete the following steps:

1. Open your SharePoint site, and click the **Site Actions** menu.
2. Select **Site Settings** and then choose **Modify All Site Settings**.

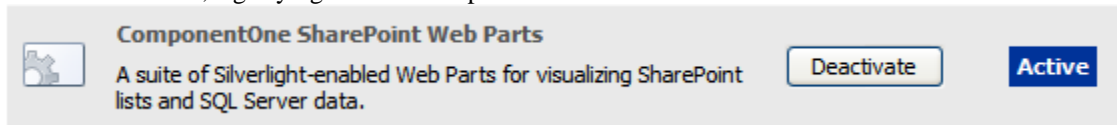


3. On the **Site Settings** page, select **Site collection features** located under **Site Collection Administration**.

### Site Collection Administration

- Search settings
- Search scopes
- Search keywords
- Recycle bin
- Site directory settings
- Site collection usage reports
- Site collection features
- Site hierarchy
- Portal site connection

4. Click the **Activate** button next to **ComponentOne SharePoint Web Parts**. A blue **Active** box will appear in the **Status** column, signifying that the ComponentOne Web Parts can now be used.



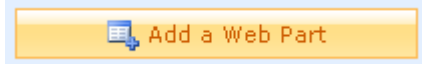
**Note:** To deactivate a Web part, click the **Deactivate** button.

## Adding ComponentOne Web Parts to a Page

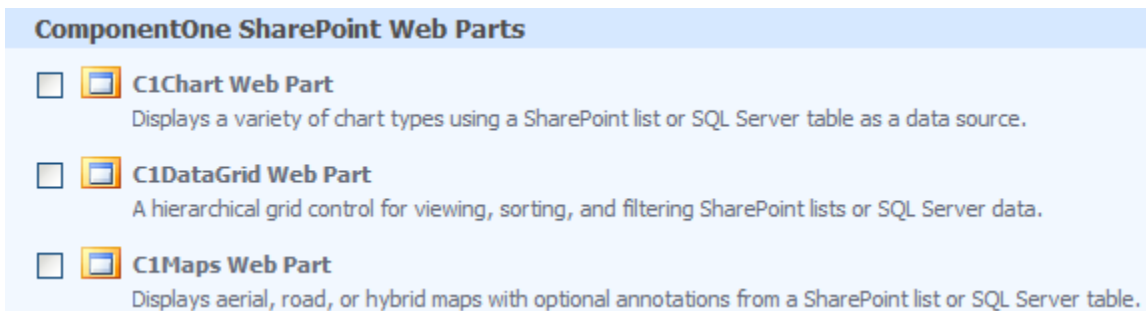
Once the ComponentOne SharePoint Web Parts have been activated, you can begin using them. To add ComponentOne Web Parts to a page, complete the following steps:

1. Select the page of the site where you would like to add Web Parts.
2. Click the **Site Actions** menu and select **Edit Page**. Note that this option will be disabled for pages that you do not have permission to edit.

The page is now in edit mode. Each zone that can include a Web Part will contain an **Add a Web Part** button



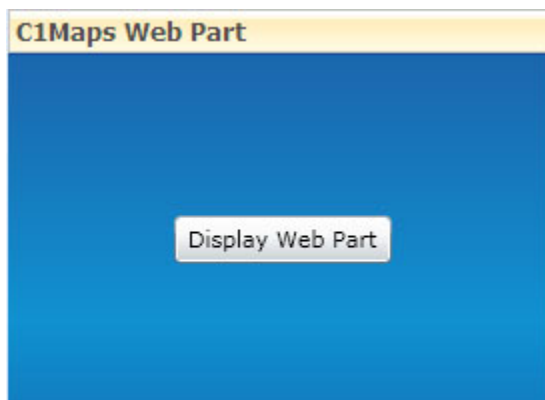
3. Click the **Add a Web Part** button in the zone where you would like to add a ComponentOne Web Part. The **Add Web Parts** dialog box appears.
4. Expand the **All Web Parts** node if it is collapsed, and scroll to locate **ComponentOne SharePoint Web Parts**.





**Note:** If **ComponentOne SharePoint Web Parts** does not appear in the list, it may not have been installed.

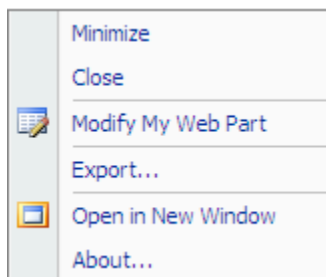
5. Select one of the Web Parts and click the **Add** button at the bottom of the dialog box. The Web Part is added to the page.
6. Select **Page | Save** or click **Check In to Share Draft** or **Publish** to save the Web Part to the page.

**Please Note:** When a page is in edit or design mode, the web part will not display immediately when you open the page. A button labeled **Display Web Part** will appear. Click it to open the Web Part. This saves time loading the page, especially if it contains multiple web parts.



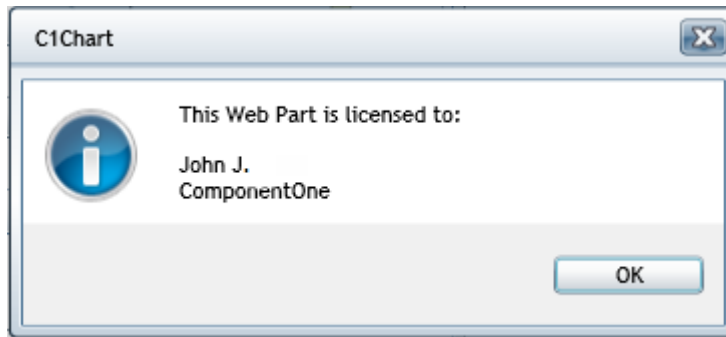
## ComponentOne Web Parts Standard Menu

All ComponentOne SharePoint Web Parts have the same standard menu. To access this menu, click the drop-down arrow  in the upper-right corner of the ComponentOne Web Part. Note that if the page is in edit mode, the drop-down arrow appears on an **edit** button .



Use this menu to perform the following commands:

Menu Command	Description
Minimize	Minimizes the Web Part.
Close	Closes the Web Part.
Modify Shared Web Part	Displays a list of SharePoint properties for the Web Part.
Export	Allows you to export the Web Part to a .webpart file.
Open in New Window	Allows you to view and edit the Web Part in a separate modal dialog window.
About	Shows to whom the product is licensed and if the product is an evaluation version. The evaluation version is good for 30 days.





## SharePoint Properties for ComponentOne Web Parts

All ComponentOne Web Parts have the same SharePoint properties. These properties, in general, affect how the Web Part is displayed on the page.

You can control all of these properties using the SharePoint tool pane, or you can control a subset of the properties relating to the appearance of your ComponentOne Web Parts using the **Appearance** tab of the C1Maps, C1DataGrid, or C1Chart Web Parts On-Board Designer. You may prefer to use the **Appearance** tab if you only want to specify the size, title, and chrome of a Web Part. An added option, available only for ComponentOne Web Parts, is the ability to prevent unauthorized users from editing the C1Maps, C1DataGrid, or C1Chart Web Parts.

## Setting Properties Using the SharePoint Tool Pane

To access these properties:

1. Click the drop-down arrow  in the upper-right corner of the ComponentOne Web Part. Note that if the page is in edit mode, the drop-down arrow appears on an **edit** button .
2. Select **Modify Shared Web Part**. A Web Part properties list appears to the right of the page. For example, here is the C1Maps Web Part properties list:

Each of the Web Part properties is described below:

### Appearance

<b>Title</b>	Defines the text that appears above the Web Part.
<b>Height</b>	Define a specific height or adjust the Web Part to fit the zone that contains it.
<b>Width</b>	Define a specific width or adjust the Web Part to fit the zone that contains it.
<b>Chrome State</b>	Select <i>Normal</i> to display the Web Part when the page is opened. Select <i>Minimized</i> to display only the title bar.
<b>Chrome Type</b>	A drop-down list that defines whether the Web Part will have a title bar and/or a border.

## Layout

<b>Hidden</b>	Determines whether the Web Part is hidden.
<b>Direction</b>	Sets the text direction.
<b>Zone</b>	Determines the zone that contains the Web Part.
<b>Zone Index</b>	Specifies the position of the Web Part in a zone when the zone contains more than one Web Part.

## Advanced

<b>Allow Minimize</b>	Determines if the Web Part can be minimized.
<b>Allow Close</b>	Determines if the Web Part can be closed.
<b>Allow Hide</b>	Determines if the Web Part can be hidden.
<b>Allow Zone Change</b>	Determines if the Web Part can be moved to a different zone.
<b>Allow Connections</b>	Determines if the Web Part can be connected to other Web Parts.
<b>Allow Editing in Personal View</b>	Determines if the Web Part can be edited in a personal view.
<b>Export Mode</b>	A drop-down list that determines if and what type of data (all or non-sensitive only) can be exported from this Web Part.
<b>Title URL</b>	Web address path to an HTML file that holds optional information about the Web Part.
<b>Description</b>	Defines the Web Part's description.
<b>Help URL</b>	Sets the location of a Help file containing Help on the Web Part.
<b>Help Mode</b>	Determines how the browser will display the Web Part's Help.
<b>Catalog Icon Image URL</b>	Sets the location of the Web Part's icon.
<b>Title Icon Image URL</b>	Sets the location of the image used in the title bar.
<b>Import Error Message</b>	Defines the error text pertaining to importing the Web Part.
<b>Target Audiences</b>	Allows for the Web Part to be displayed only to certain groups of people. You can browse groups and audiences and check individual names.

## Setting Properties Using the C1 Web Part Appearance Tab

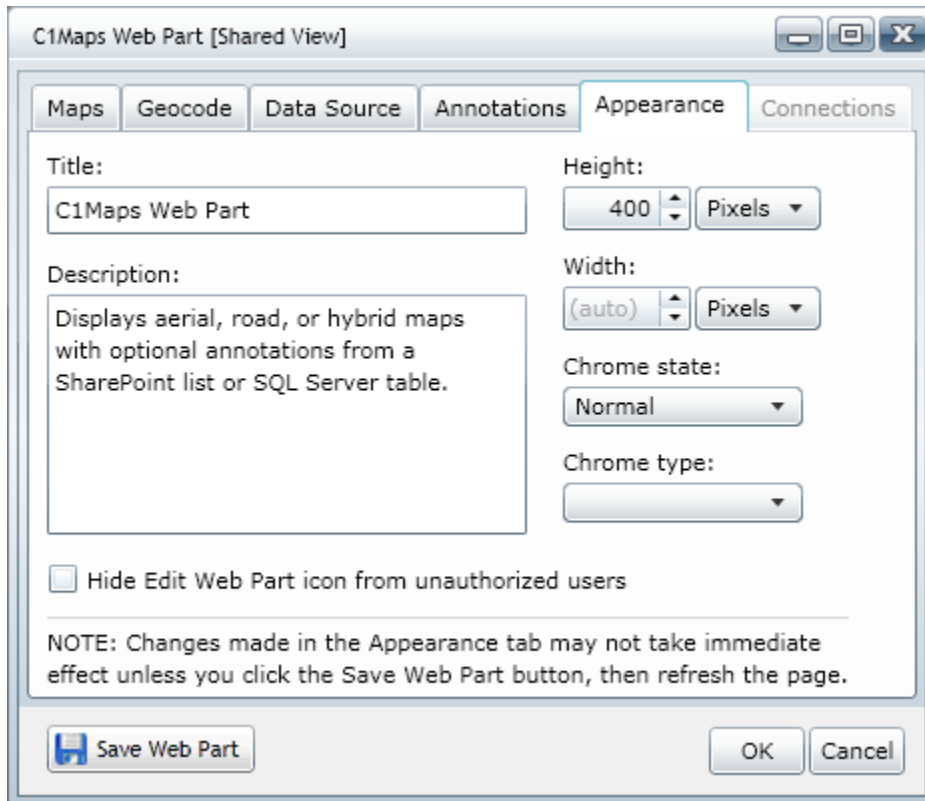
With the **Appearance** tab you can specify the size, title, and chrome of a Web Part without using the SharePoint tool pane. You may also choose to prevent unauthorized users from editing the C1Maps, C1DataGrid, or C1Chart Web Parts using the **Hide Edit Web Part Icon from unauthorized users** check box.

Please note that you can set additional properties using the SharePoint tool pane, see [Setting Properties Using the SharePoint Tool Pane](#) on page 19 for more information.

To access the Appearance properties:

1. Click the icon in the top left corner of the Web Part to access the Web Part On-Board Designer.
2. Click the **Appearance** tab.





### Appearance

<b>Title</b>	Defines the text that appears above the Web Part.
<b>Description</b>	Defines the Web Part's description.
<b>Height</b>	Define a specific height for the Web Part.
<b>Width</b>	Define a specific width or adjust the Web Part to fit the zone that contains it.
<b>Chrome State</b>	Select <i>Normal</i> to display the Web Part when the page is opened. Select <i>Minimized</i> to display only the title bar.
<b>Chrome Type</b>	A drop-down list that defines whether the Web Part will have a title bar and/or a border.

### Control Web Part Editing

<b>Hide Edit Web Part icon from unauthorized users</b>	Select the check box to hide the Edit Web Part icon from those without permissions.
--	---



Use the **Hide Edit Web Part icon from unauthorized users** check box to control access to the on-board editor. By default, the check box is not selected, and all users have access to the editor, even if the **Save Web Part** button is hidden or not enabled. If the check box is selected, the **Edit Web Part** icon will not be displayed to users who do not have rights to update personalized Web Parts on the page in question. If a user has update rights, but the page is not checked out, the icon will still appear.

**Note:** When you change the **Title**, **Width**, or **Height**, the updates will display when you click the **OK** button. For changes to the **Description** or **Chrome** settings, you will need to click **Save Web Part** and refresh the page to view the changes.

## Resizing ComponentOne Web Parts

You can change the size of a Web Part using its SharePoint properties. You can also do so using the **Appearance** tab of the Web Part. See [Setting Properties Using the C1 Web Part Appearance Tab](#) on page 20 for details.



To resize ComponentOne Web Parts using SharePoint Properties, complete the following steps:

1. Select the page of the site where you would like to resize a Web Part.
2. Click the drop-down arrow  in the upper-right corner of the ComponentOne Web Part. Note that if the page is in edit mode, the drop-down arrow appears on an **edit** button .
3. Select **Modify Shared Web Part**. A Web Part properties list appears to the right of the page.
4. Under the **Appearance** node, there are properties for **Height** and **Width**. Choose to set the height and width to absolute values measured in pixels, or you can have the Web Part fill the zone that contains it.
5. Click **Apply** to save your changes. The page will update to reflect your changes.

**Note:** Depending on how the page is set up, you may need to click **Check In to Share Draft** or **Publish** to commit these changes.

## Exporting ComponentOne Web Parts

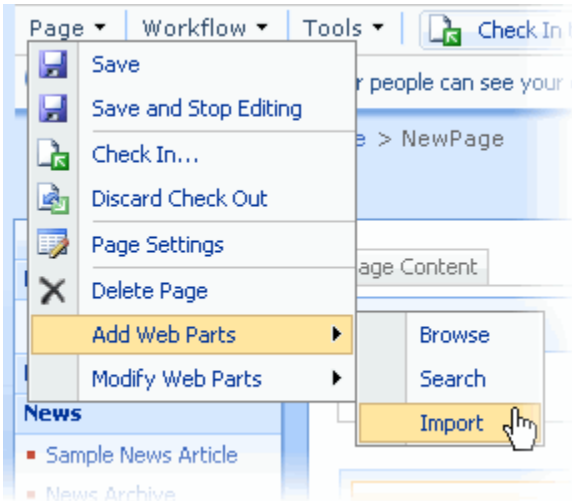
You can export configured Web Parts to be used in other SharePoint sites. To export Web Parts, complete the following steps:

1. Select the page of the site containing the Web Part you want to export.
2. Click the drop-down arrow  in the upper-right corner of the ComponentOne Web Part. Note that if the page is in edit mode, the drop-down arrow appears on an **edit** button .
3. Select **Export**.
4. Click **Save** and save the .webpart file to the desired location.

## Importing ComponentOne Web Parts

You can easily import configured Web Parts into your SharePoint site. To do this, complete the following steps:

1. Open a page of the site where you want to import a Web Part.
2. Select **Page | Add Web Parts | Import** to import an existing Web Part.



The **Add Web Parts** menu will open on the right side of the page.

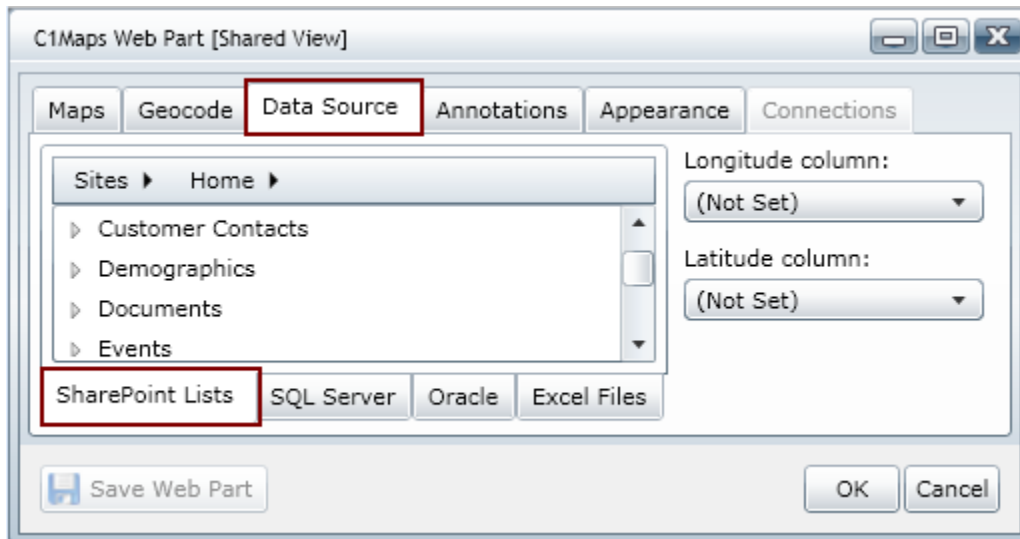
3. In the **Add Web Parts** menu, select the **Browse** button to locate a file.
4. In the **Open File** dialog box, select a .webpart file and click **Open**.
5. In the **Add Web Parts** menu, select **Upload** to upload the selected file.

The selected file will now appear in the **Uploaded Web Part** list in the **Add Web Parts** menu.

6. With a file in the **Uploaded Web Part** list selected, click the **Add to** drop-down box and select a location to add the file.
7. Click the **Import** button to import the file to the chosen location.

## Using a SharePoint List Data Source

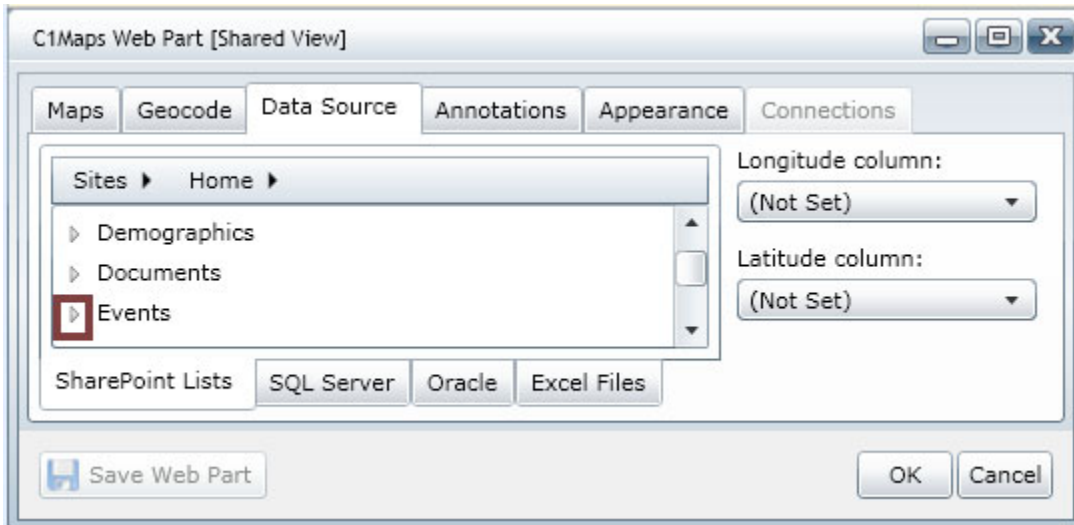
A Microsoft SharePoint list can be used as a data source for your ComponentOne Web Parts. Here is how to set the list of sites that will be available when configuring your ComponentOne Web Parts.



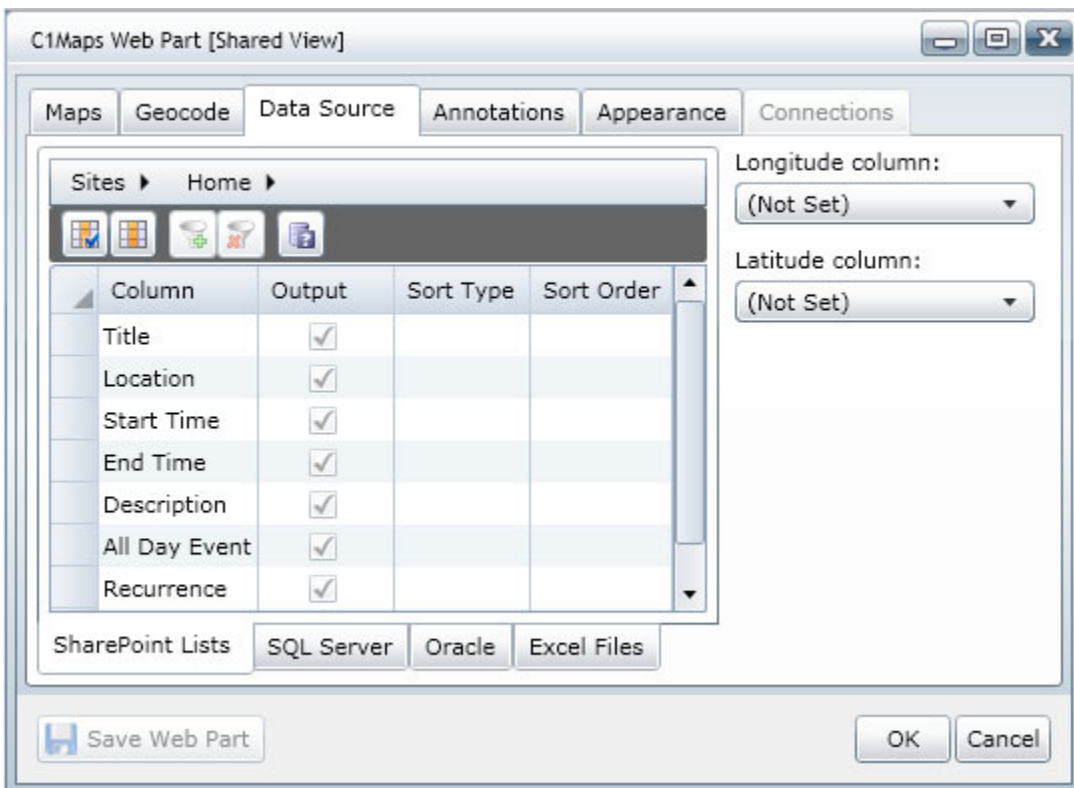
To use a SharePoint list as your data source, complete the following steps:

1. Click the icon in the top left corner of the ComponentOne Web Part to display the On-Board Designer.

2. Under **Data Source**, click the **SharePoint Lists** tab. Use the **Sites** menu to select the name of your site or to navigate to other sites within the site collection. Click **More** to type the URL of a different site. Note that if there are multiple sites with the same name, you can hover over the name to see the full URL of the site. When you select a site, all of its lists are shown below the **Sites** menu.
3. Scroll the list and select the desired list.
4. Clicking the arrow next to the list displays available columns within that site.



See [Sorting and Filtering Lists and Tables](#) on page 34 for more information on how to sort or filter using this view.



Note that users without **Contribute** permissions will be restricted to the initial list display

5. Click **Save Web Part**. Other options for customizing the display of the data source may be available for the Web Part. See [Setting the C1Maps Data Source](#) on page 50, [Setting the C1DataGrid Data Source](#) on page 64, or [Setting the C1Chart Data Source](#) on page 92 for more information.

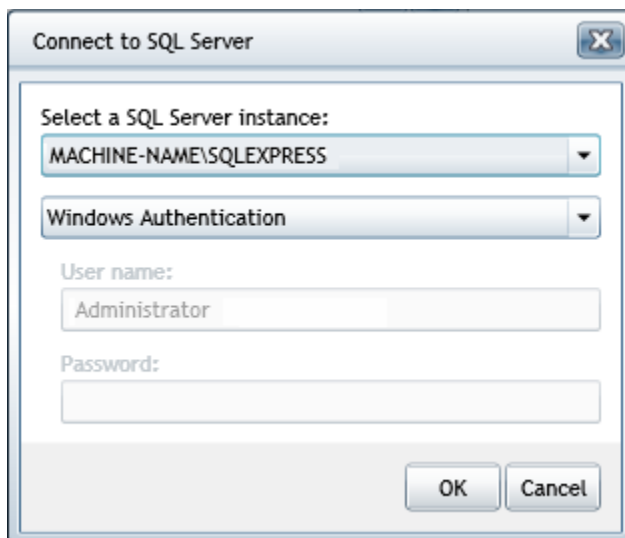
**Note:** To return to the original display, click **Sites | Home** or click the database name in the menu bar.

## Using a SQL Server Table Data Source

SQL Server tables or views can be used as a data source for your ComponentOne Web Parts. Here is how to specify the list of servers that will be available when configuring your ComponentOne Web Parts.

To use a SQL Server table or view as your data source, complete the following steps:

1. Click the icon in the top left corner of the ComponentOne Web Part to display the On-Board Designer.
2. Under **Data Source**, click the **SQL Server** tab, click **Servers**, and then click **More**.
3. Wait for the SQL Server instance list to finish loading. Type the first few letters of the SQL Server instance name or choose one from the list. If the desired instance is not in the list, select **(Type a server name...)** and then enter the full name.
4. Select **Windows Authentication** or **SQL Server Authentication**. For example:



**Note:** You can use SQL Server Authentication to avoid the "double hop issue" when SharePoint and SQL Server reside on different machines (and Kerberos authentication is not configured). If SQL Server Authentication is used, enter a **Username** and **Password**. These are encrypted and are not visible to consumers of Web Part pages.

5. Click **OK**. If you are authorized, another menu will open with a list of SQL Server databases (catalogs).
6. Select the desired database, and the available tables and views will be displayed by default below the menu.

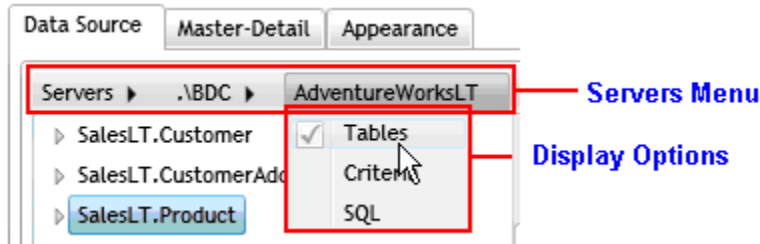
**Note:** If you click the database name in the menu, you also have the option to use **Criteria** or a **SQL** statement to determine what will appear in your ComponentOne Web Part. See [SQL Server Table Display Options](#) on page 26 for more information.

7. Select one of the tables or views to specify a data source for the Web Part.

- Click **Save Web Part**. Other options for customizing the display of the data source may be available for the Web Part. See [Setting the C1Maps Data Source](#) on page 50, [Setting the C1DataGrid Data Source](#) on page 64, or [Setting the C1Chart Data Source](#) on page 92 for more information.

## SQL Server Table Display Options

If you click the database name in the **Servers** menu on the **SQL Server** tab when specifying a data source, you have the option to use **Tables**, **Criteria**, or a **SQL** statement to determine what will appear in your ComponentOne Web Part.

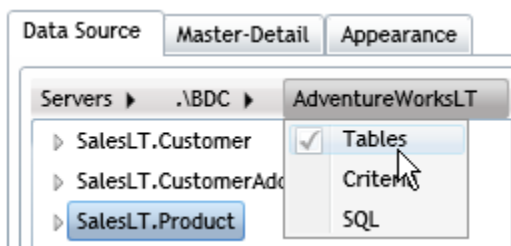


The C1DataGrid Web Part is used for the following examples.

### Using the Tables Option

This is the default display option. To view the tables available, follow these steps:

- Click the icon in the top left corner of the C1DataGrid Web Part to display the On-Board Designer.
- Under **Data Source**, click the **SQL Server** tab, click **Servers**, and then click **More**.
- Wait for the SQL Server instance list to finish loading. Type the first few letters of the SQL Server instance name or choose one from the list. If the desired instance is not in the list, select **(Type a server name...)** and then enter the full name.
- Select **Windows Authentication** or **SQL Server Authentication**.
- Click **OK**. If you are authorized, another menu will open with a list of SQL Server databases (catalogs).
- Select the desired database, and the available tables and views will be displayed by default below the menu.
- Select the database name from the **Servers** menu. A drop-down list appears. **Tables** is selected by default.



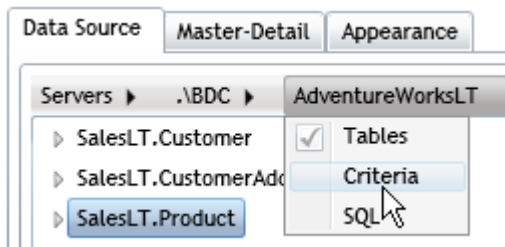
- Select the desired item from the list of available tables and views.
- Click **OK** and the grid is populated with data from the table or view.

### Using the Criteria Option

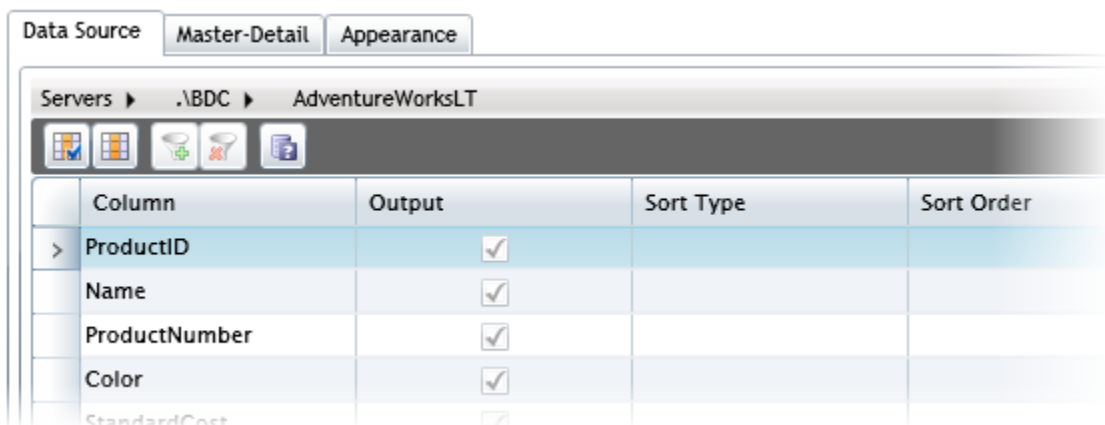
To select criteria for displaying data in your grid, follow these steps:

- Click the icon in the top left corner of the C1DataGrid Web Part to display the On-Board Designer.
- Under **Data Source**, click the **SQL Server** tab, click **Servers**, and then click **More**.

3. Wait for the SQL Server instance list to finish loading. Type the first few letters of the SQL Server instance name or choose one from the list. If the desired instance is not in the list, select **(Type a server name...)** and then enter the full name.
4. Select **Windows Authentication** or **SQL Server Authentication**.
5. Click **OK**. If you are authorized, another menu will open with a list of SQL Server databases (catalogs).
6. Select the desired database, and the available tables and views will be displayed by default below the menu.
7. Select the desired item from the list of available tables and views.
8. Select the database name from the **Servers** menu. A drop-down list appears.
9. Choose **Criteria**.



The list of available tables and views is replaced by a grid display where you can specify columns to be fetched, the sort order, and filter criteria. The grid display is similar to query builders in Microsoft products. See [Sorting and Filtering Lists and Tables](#) on page 34 for more information on how to sort or filter.



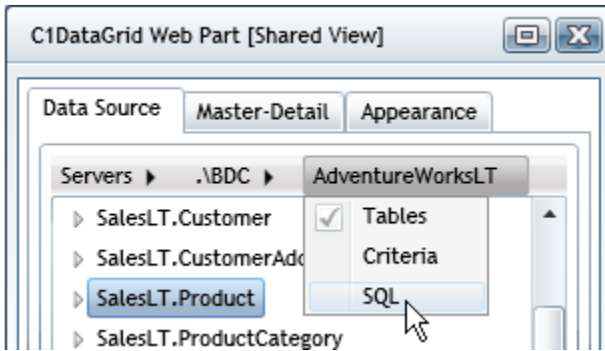
10. Click **OK** once you have specified the sort or filter criteria. The grid is populated based on your specifications.

### Using the SQL Option

The following examples show how to use a stored procedure to specify the data used to populate the C1DataGrid Web Part.

1. Click the icon in the top left corner of the C1DataGrid Web Part to display the On-Board Designer.
2. Under **Data Source**, click the **SQL Server** tab, click **Servers**, and then click **More**.
3. Wait for the SQL Server instance list to finish loading. Type the first few letters of the SQL Server instance name or choose one from the list. If the desired instance is not in the list, select **(Type a server name...)** and then enter the full name.
4. Select **Windows Authentication** or **SQL Server Authentication**.
5. Click **OK**. If you are authorized, another menu will open with a list of SQL Server databases (catalogs).
6. Select the desired database, and the available tables and views will be displayed by default below the menu.
7. Select the database name from the **Servers** menu. A drop-down list appears.

8. Select **SQL**.

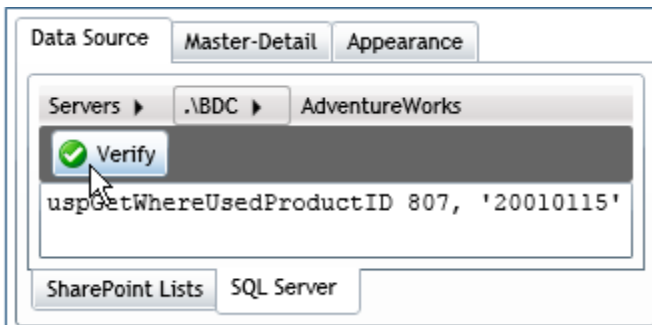


9. In the text area, enter a stored procedure. Here are two examples:  
`uspGetManagerEmployees 3`

`uspGetWhereUsedProductID 807, '20010115'`

**Note:** Separate arguments with commas and do not enclose them in parentheses. Specify date arguments as strings in this format: 'YYYYMMDD'.

10. Click the **Verify** button. A message box will appear if there are syntax errors.



11. Click **OK**. The C1DataGrid Web Part retrieves the specified data and uses it to populate the grid.

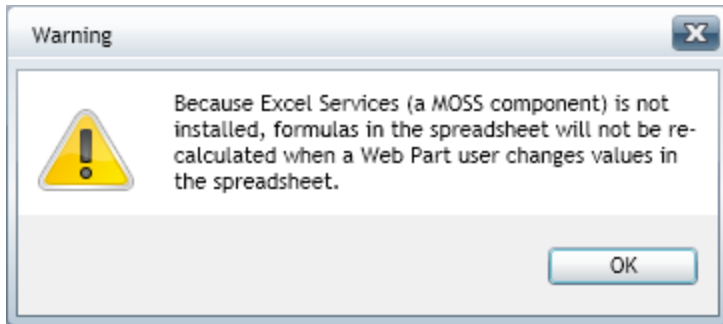
**Note:** In addition to stored procedures, you can also use the SQL option to enter a custom SELECT statement. This is useful when you cannot express the desired query using the Criteria option's interface, or you want to specify a query that uses aggregate functions or JOIN statements.

## Using an Excel File Data Source

Microsoft® Excel files can be used as a data source for your ComponentOne Web Parts. Here is how to specify the list of files that will be available when configuring your ComponentOne Web Parts.

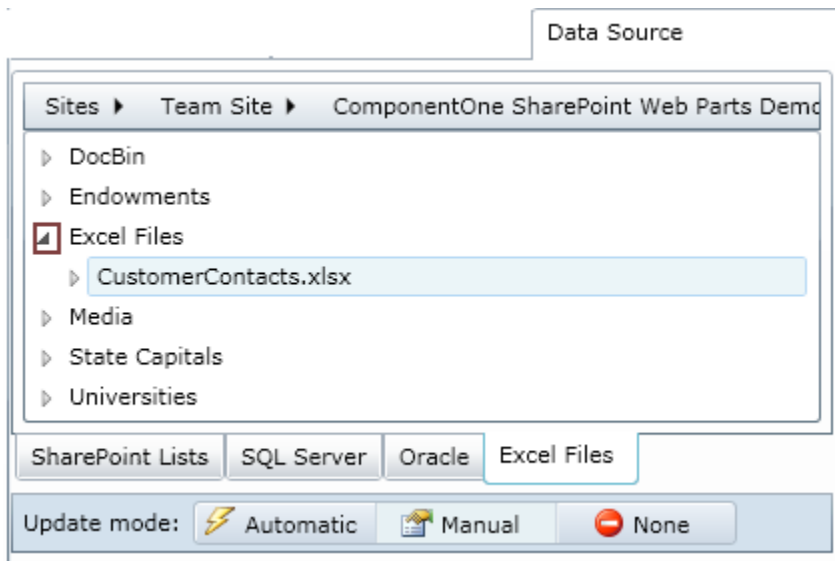
If you would like to use Excel formulas, you will need to install Excel Services on the server. If it is not installed, users will receive this message, but the Excel files will still work.



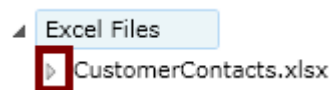


To use an Excel File as your data source, complete the following steps:

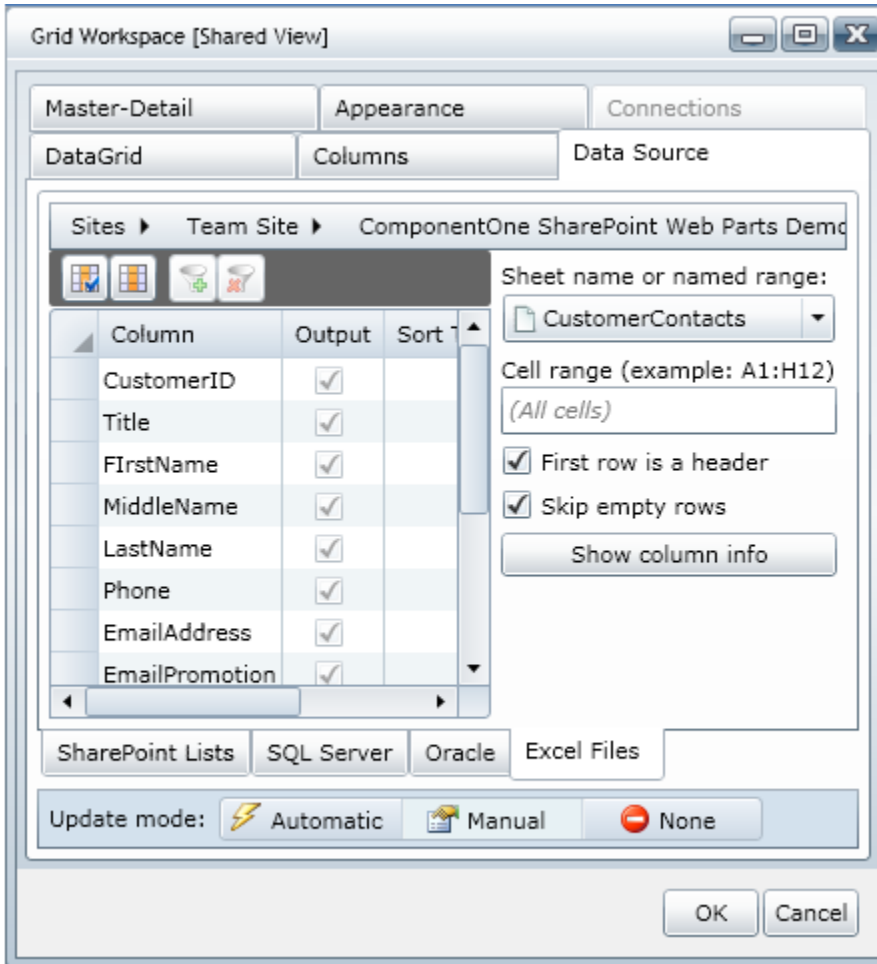
1. Click the icon in the top left corner of the ComponentOne Web Part to display the On-Board Designer.
2. Under **Data Source**, click the **Excel Files** tab. Use the **Sites** menu to select the name of your site or to navigate to other sites within the site collection. Click **More** to type the URL of a different site. Note that if there are multiple sites with the same name, you can hover over the name to see the full URL of the site. When you select a site, all of its lists are shown below the **Sites** menu.
3. Scroll the list and click the arrow next to desired list.



4. Select the file.
5. Clicking the arrow next to the list displays available columns within that site.



See [Sorting and Filtering Lists and Tables](#) on page 34 for more information on how to sort or filter using this view.



- Select the **Sheet name or named range** from the drop-down list.
- Enter the **Cell range**.
- **First row is a header** and **Skip empty rows** are selected by default. Clear the check boxes if desired.
- If you select a different **Sheet name**, click **Show column info** to display the new set of columns.

Note that users without **Contribute** permissions will be restricted to the initial list display.

6. Click **Save Web Part**. Other options for customizing the display of the data source may be available for the Web Part. See [Setting the C1Maps Data Source](#) on page 50, [Setting the C1DataGrid Data Source](#) on page 64, or [Setting the C1Chart Data Source](#) on page 92 for more information.

**Note:** To return to the original display, click **Sites | Home** or click the database name in the menu bar.

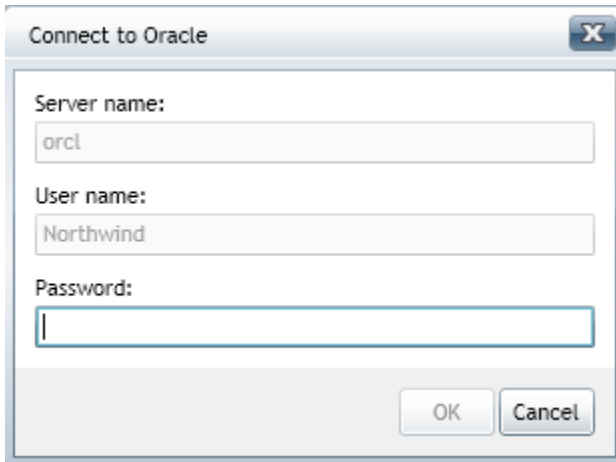
## Using an Oracle Data Source

An Oracle database can be used as a data source for your ComponentOne Web Parts.

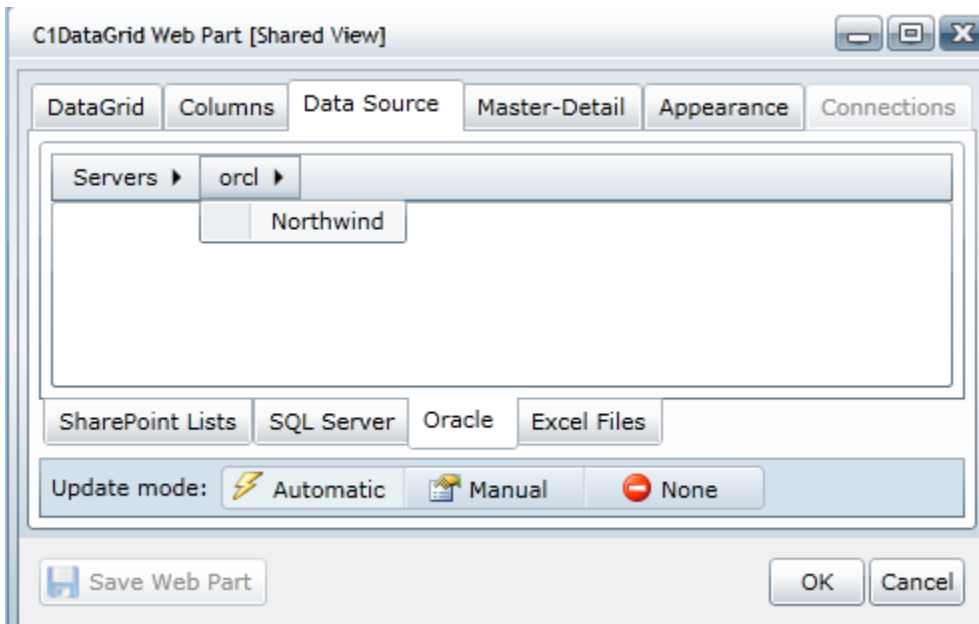
**To use an Oracle database as your data source, complete the following steps:**

1. Click the icon in the top left corner of the ComponentOne Web Part to display the On-Board Designer.
2. Under **Data Source**, click the **Oracle** tab, click **Servers**, and then click **More**.

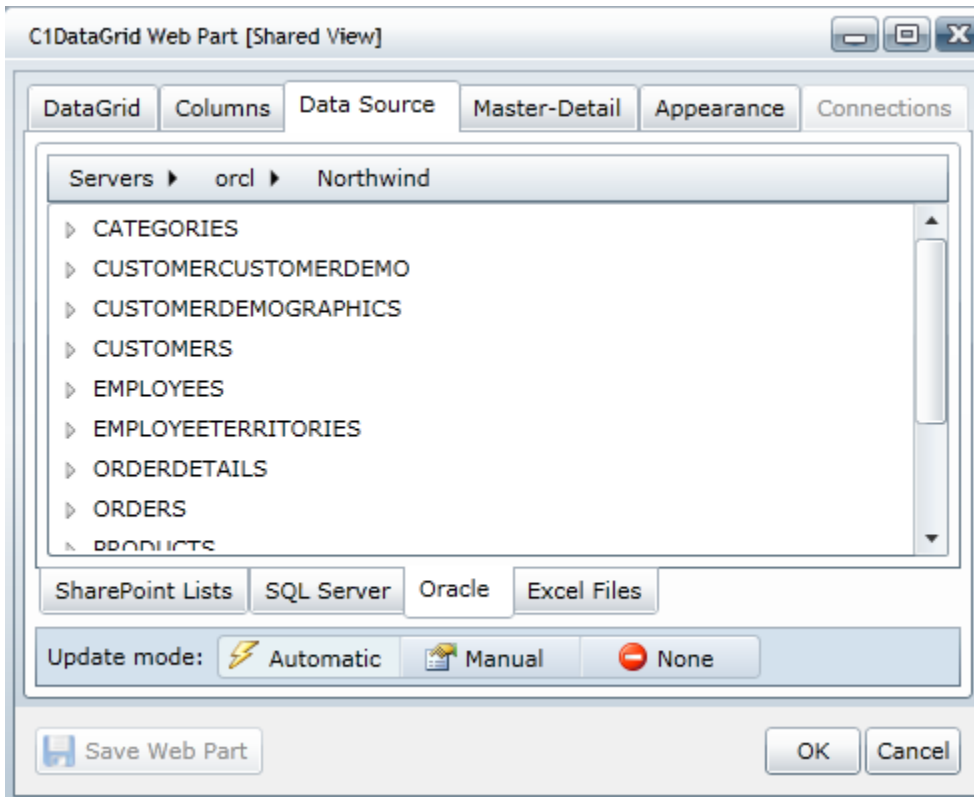
3. Type the Oracle database name under **Server name**.
4. Type your user name for that database under **User name**.
5. Enter the password for the given user.



6. Click **OK**. The database name and the user name for that database will appear in the menu.



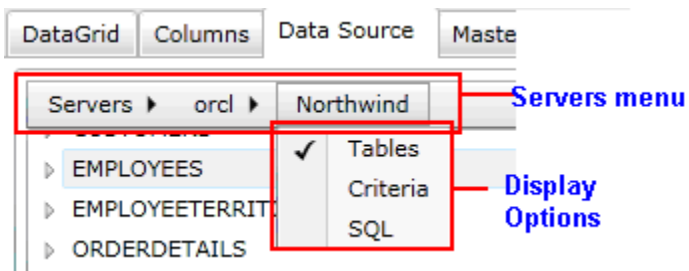
7. Select the desired database, and the available tables and views will be displayed by default below the menu.



8. Select one of the tables or views to specify a data source for the Web Part.
9. Click **Save Web Part**. Other options for customizing the display of the data source may be available for the Web Part. See [Setting the C1Maps Data Source](#) on page 50, [Setting the C1DataGrid Data Source](#) on page 64, or [Setting the C1Chart Data Source](#) on page 92 for more information.

## Oracle Display Options

If you click the database name in the **Servers** menu on the **Oracle** tab when specifying a data source, you have the option to use **Tables**, **Criteria**, or a **SQL** statement to determine what will appear in your ComponentOne Web Part.



The C1DataGrid Web Part is used for the following examples.

### Using the Tables Option

This is the default display option.

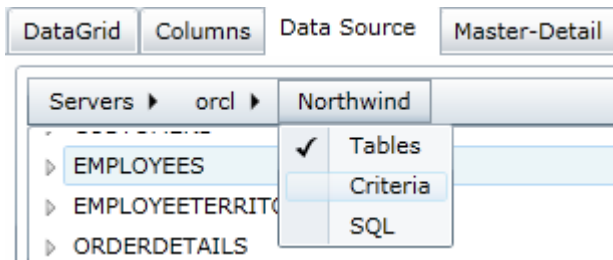
To view the tables available, follow these steps:

1. Select **Tables**.
2. Select the desired item from the list of available tables and views.
3. Click **OK** and the grid is populated with data from the table or view.

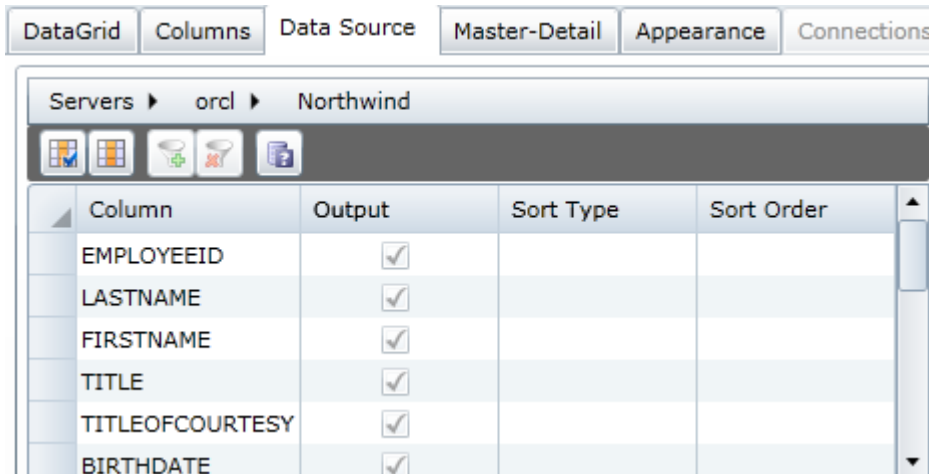
### Using the Criteria Option

To select criteria for displaying data in your grid, follow these steps:

1. Select **Criteria**.



The list of available tables and views will be replaced by a grid display where you can specify columns to be fetched, the sort order, and filter criteria. The grid display is similar to query builders in Microsoft products. See [Sorting and Filtering Lists and Tables](#) on page 34 for more information on how to sort or filter.

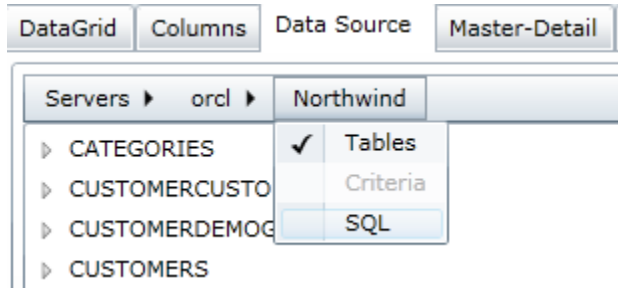


2. Click **OK** once you have specified the sort or filter criteria. The grid is populated based on your specifications.

## Using the SQL Option

The following examples show how to use a stored procedure to specify the data used to populate the C1DataGrid Web Part.

1. Select **SQL**.

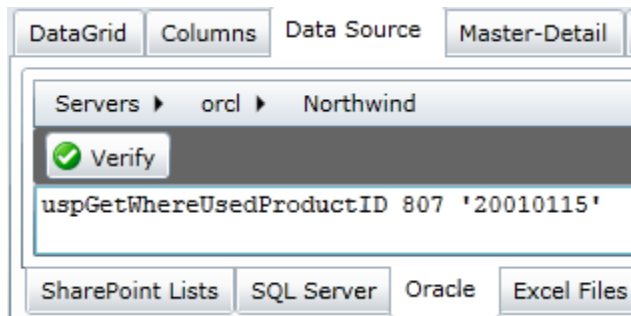


2. In the text area, enter a stored procedure. Here are two examples:  
`uspGetManagerEmployees 3`

`uspGetWhereUsedProductID 807, '20010115'`

**Note:** Separate arguments with commas and do not enclose them in parentheses. Specify date arguments as strings in this format: 'YYYYMMDD'.

3. Click the **Verify** button. A message box will appear if there are syntax errors.



4. Click **OK**. The C1DataGrid Web Part retrieves the specified data and uses it to populate the grid.

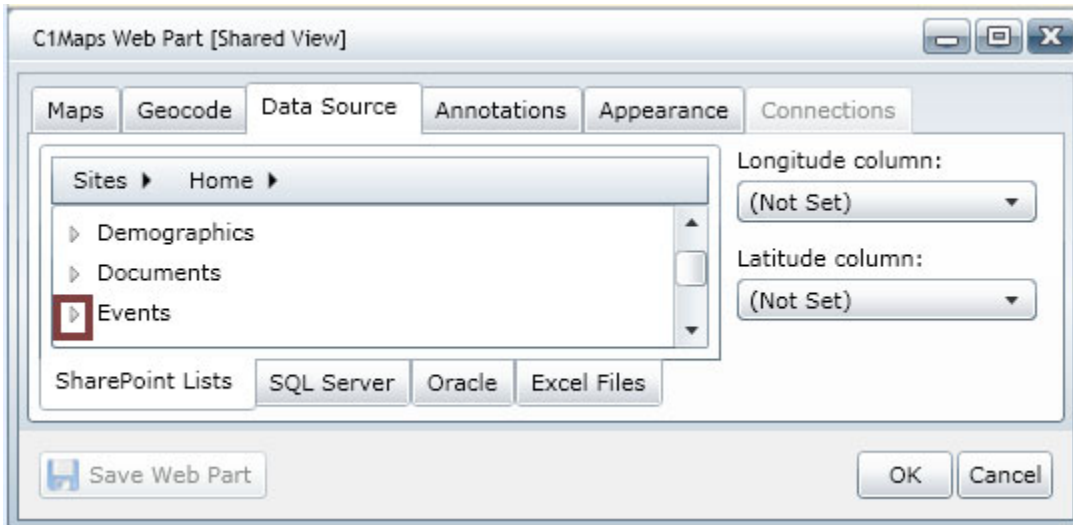
**Note:** In addition to stored procedures, you can also use the SQL option to enter a custom SELECT statement. This is useful when you cannot express the desired query using the Criteria option's interface, or you want to specify a query that uses aggregate functions or JOIN statements.

## Sorting and Filtering Lists and Tables

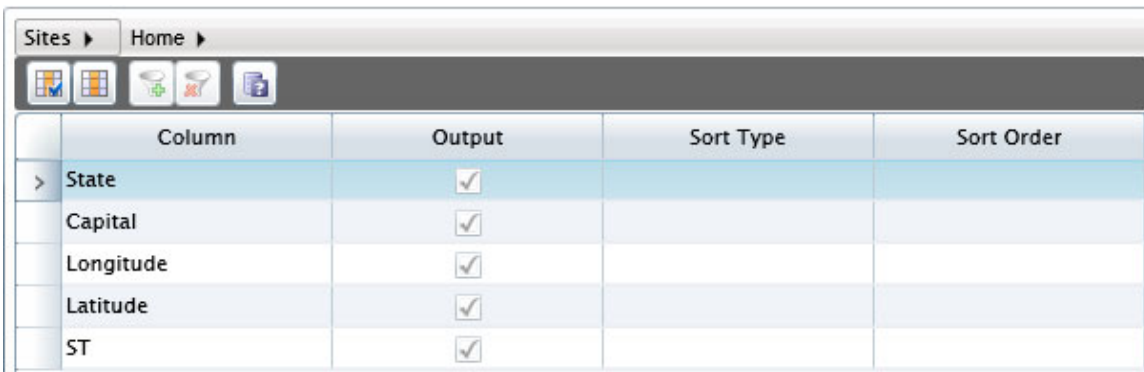
ComponentOne Web Parts allow you to sort and filter your lists and tables. Sorting and filtering are supported on client and server. The following shows how to sort and filter on the server.

**To sort and filter data, complete the following steps:**




1. Click the icon in the top left corner of the ComponentOne Web Part to display the On-Board Designer.
2. Under **Data Source**, click the arrow next to the SharePoint list, SQL Server table/view, Excel file, or Oracle list.



The list or table tree view is replaced by a grid display where you can specify columns to be fetched, the sort order, and filter criteria. The grid display is similar to query builders in Microsoft products.



For more information on configuring the data source, see [Using a SharePoint List Data Source](#) on page 23, [Using a SQL Server Table Data Source](#) on page 25, [Using an Excel File Data Source](#) on page 28, or [Using an Oracle Data Source](#) on page 30.

3. If you would like all columns to be used in the sort or filter, click the **Include all columns** button  in the grid's toolbar. If you have a long list of columns, and you want to specify only a few to be included in the sort or filter, you may want to click the **Exclude all columns** button  and then check the checkbox in the **Output** column for each column to be included.
4. To sort data, complete the following steps:
  - a. Click in the **Sort Type** column for the item you would like to sort. A drop-down list appears.
  - b. Select **Descending**, **Ascending**, or **Unsorted**, depending on how you would like the data to be sorted.
  - c. Click in the **Sort Order** column. A listbox appears.
  - d. Use the arrows to enter a number to determine the sequence in which the columns will be sorted (for example, enter **1** to have items in the specified column sorted first).
5. To filter data, complete the following steps:
  - a. Click the row selector for the column to filter.
  - b. Click the **Add filter condition** button  in the toolbar.

- c. Enter a filter expression under **Filter**. You can use multiple filter expressions by entering them in the **Or** columns.

Expressions must start with an operator, such as one of the following:

= (or ==)      <=      <  
<> (or !=)      >=      >

For SQL Server, string constants in expressions must be enclosed in single quotes. For SharePoint lists, the single quotes are optional.


Column	Output	Sort Type	Sort Order
State	<input checked="" type="checkbox"/>		
Capital	<input checked="" type="checkbox"/>		
Longitude	<input checked="" type="checkbox"/>		
Latitude	<input checked="" type="checkbox"/>		
ST	<input checked="" type="checkbox"/>		

Column	Filter	Or...	Or...
ST	=PA	=MD	

**Note:** To return to the original display, click **Sites | Home** or click the database name in the menu bar.

**To remove a filter, complete the following steps:**

1. Click the row selector next to the filter you would like to remove.
2. Click the **Remove filter condition** button  in the toolbar.

**To view the text version of the sort and filter conditions:**

Click the **Show as text** button  in the toolbar. The text appears.

```

StateCapitals
<List>
  <ViewFields>
    <FieldRef Name="Title"/>
    <FieldRef Name="Capital"/>
    <FieldRef Name="Longitude"/>
    <FieldRef Name="Latitude"/>
    <FieldRef Name="ST"/>
  </ViewFields>
  <Query>
    <Where>
      <Or>
        <Eq <FieldRef Name="ST"/> <Value Type="Text">PA</Value></Eq>
      </Or>
      <Eq <FieldRef Name="ST"/> <Value Type="Text">MD</Value></Eq>
    </Where>
  </Query>
</List>
  
```

OK



# Adding a Template to the List Template Gallery

This topic explains how to add a template to the **SharePoint List Template Gallery** so it can be used to create lists for the ComponentOne Web Parts tutorials. The following list templates are available in HelpCentral at:

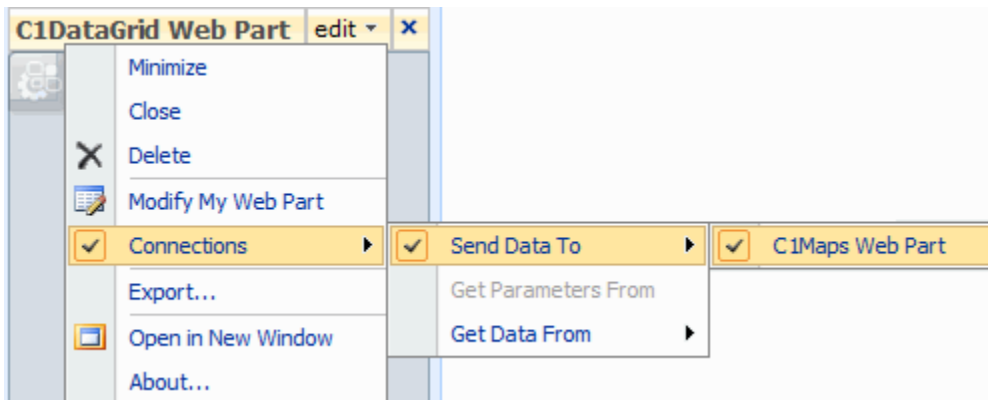
1. Download the template from <http://www.componentone.com/newimages/products/files/sampledata.zip> to your machine.
2. Click **Site Actions** and select **Site Settings**.
3. In the **Galleries** column, select **List templates**.
4. In the **List Template Gallery**, click the **Upload** button.
5. Click **Browse**, select the list template from wherever you placed it on your machine, and click **Open**.
6. Click **OK** in the **Upload Template: List Template Gallery** window.
7. Enter a name for the template (.stp file) in the **Name** text box.
8. Enter a title and description of the template in the **Title** and **Description** text boxes, respectively, and then click **OK**. You can now use the template to create the lists used in the tutorials. See the [C1Maps Tutorial](#) on page 57, [C1DataGrid Tutorial](#) on page 74, and [C1Chart Tutorial](#) on page 96 for more information.

# Creating Connections between C1 Web Parts

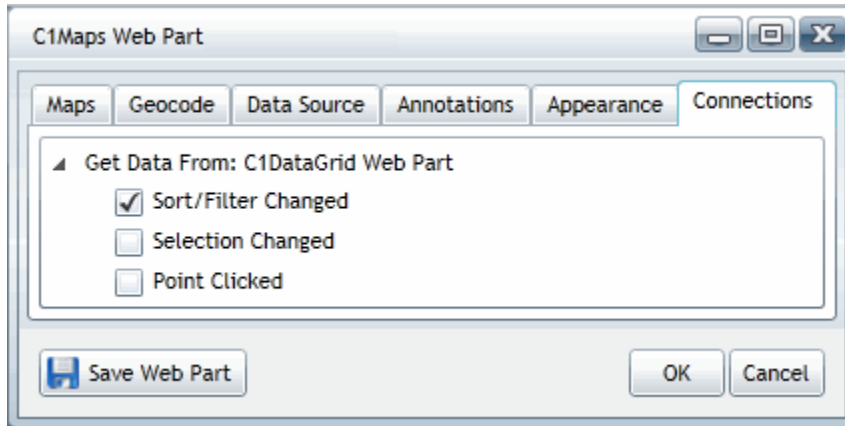
You can pass data from one ComponentOne Web Part to another **on the same page** by using **Web Part Connections**. For example, you can connect a **C1Maps Web Part** to a **C1DataGrid Web Part**. When the user clicks a marker on the map, the underlying data is passed directly to the grid, which can be configured to filter its own data source in accordance with the values received from the map.

When multiple *ComponentOne Web Parts* are connected in this manner, the data transfer occurs on the client, and only the Web Parts themselves are refreshed. When multiple *SharePoint Web Parts* are connected, the data transfer occurs on the server, and the entire page is re-rendered.

To create a connection between Web Parts, the page must be in edit mode. Click the **Site Actions** menu and select **Edit Page**. Note that this option will be disabled for pages that you do not have permission to edit. Next, click the **edit** button **edit** and choose **Connections**.



Once the connection is made, you can view the connection options in the **Connections tab** of the Web Part's On-Board Designer.



One Web Part sends the data (the provider — in the example above: C1DataGrid) and the other one receives it (the consumer — in the example: C1Maps). Each Web Part exposes one or more [provider events](#) on page 38 that specify which user actions will cause data to be sent to the consumer. For example, the C1DataGrid Web Part can respond to changes in its overall data view (such as sorting and filtering) as well as the selection of individual rows. Similarly, you can configure consumer Web Parts to handle or ignore specific user actions.

By default, when a consumer Web Part receives data from a provider, it displays the first row of data in a grid in a popup window. You can override the default behavior by writing a line or two of code to filter the consumer's data source or perform some other action based on the structure of the data received from the provider. See [Consumer Event Handlers](#) on page 39 for more information and examples.

## Provider and Consumer Events

In the provider Web Part, the **Connections tab** of the On-Board Designer is used to specify which events will cause data to be transferred to the consumer. Likewise, in the consumer Web Part, the **Connections tab** is used to specify which events the consumer will respond to. In order for an event to be handled on both ends, it must be enabled in the **Connections tab** for each Web Part.

The C1DataGrid Web Part supports the following provider events:

<b>Sort/Filter Changed</b>	The user changed the sort order or filter criteria by interacting with the grid's column headers.
<b>Selection Changed</b>	The user selected one or more rows by clicking a grid cell or interacting with the row selector buttons.

The C1Chart Web Part supports the following provider events:

<b>Selection Changed</b>	The user clicked a visual element representing a data point, such as a bar, column, or pie slice.
--------------------------	---

The C1Maps Web Part supports the following provider events:

<b>Selection Changed</b>	The user clicked an annotation marker representing a row in the underlying data source.
<b>Point Clicked</b>	The user clicked the surface of the map.

All three Web Parts support the following consumer events:

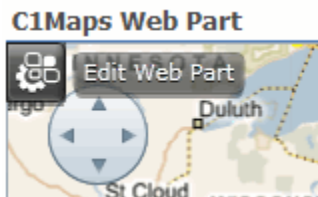
<b>Sort/Filter Changed</b>	The consumer will accept an entire data set from the provider, which can only be a C1DataGrid Web Part.
<b>Selection Changed</b>	The consumer will accept one or more selected data rows from the provider, which can be any C1 Web Part.
<b>Point Clicked</b>	The consumer will accept a point (longitude/latitude) from the provider, which can only be a C1Maps Web Part.

It is possible for two connected Web Parts to handle both Sort/Filter Changed and Selection Changed events.

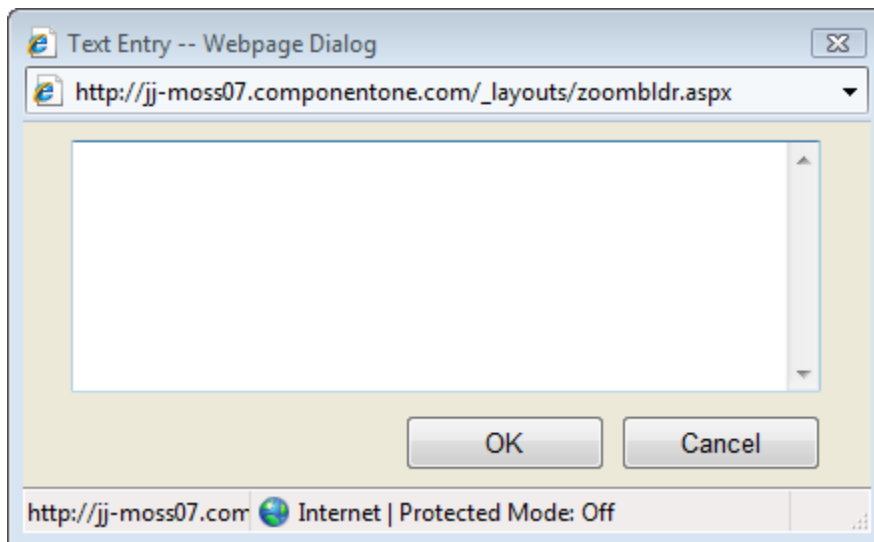
## Consumer Event Handlers

When two C1 Web Parts are connected and the user triggers a provider event that the consumer is configured to accept, the default action for the consumer is to display the first row of provider data in a popup window containing a two-column table with property names and values. This allows you to view the structure of the underlying data so you can decide what to do with it. For example, if the incoming data is from a selected grid row, you need to know the names of the provider's data columns in order to construct a filter expression for the consumer.

To customize the behavior of a consumer Web Part, you need to insert custom code in the **Text Entry** dialog box. To open this dialog box, hover over the **Edit Web Part** icon and **Ctrl + Click**.



The **Text Entry** dialog box will open.



Type your code into the box provided, then click **OK**. Note that the OK button in the **Text Entry** dialog works like the OK button in the On-Board Designer. It lets you test your changes, but they will not be persisted unless you subsequently click the **Save Web Part** button in the On-Board Designer.

## ConsumeData Event

This event is called to render the data passed from the provider within the context of the consumer. The default implementation is equivalent to this line of code:

```
this.ConsumeData = InspectData
```

InspectData is one of the built-in functions available to all C1 Web Parts for handling consumer events in a connection. Here is the complete list of consumer event handlers:

### CenterGeocode

Use this function in a C1Maps consumer to pass provider data to the Bing Maps geocode server and set the center of the map to the resulting longitude/latitude position. In order to use this function, Bing Maps credentials must be supplied in the [Geocode tab](#) on page 49.

#### Arguments:

At least one provider column name, enclosed in quotes, containing addresses, zip codes, or other location data. Separate multiple arguments with a comma.

#### Example:

```
this.ConsumeData = lambda: CenterGeocode("City", "State", "Zip")
```

### CenterPoint

Use this function in a C1Maps consumer to set the center of the map to the longitude/latitude position specified in the data received from the provider.

#### Arguments:

Two provider column names, enclosed in quotes, and separated by a comma. The first one is the longitude, the second one is the latitude.

#### Example:

```
this.ConsumeData = lambda: CenterPoint("Longitude", "Latitude")
```

### FilterData

Use this function in any C1 consumer to filter its data source based upon the unique values of a field in the data received from the provider. This function handles both single-row and multiple-row data.

#### Arguments:

A provider column name, followed by the corresponding consumer column name, enclosed in quotes, and separated by a comma.

#### Example:

```
this.ConsumeData = lambda: FilterData("EmployeeID", "SalesPersonID")
```

### FilterDataPoint

Use this function in any C1 consumer that is connected to a C1Chart provider. This function filters the consumer data source based upon the unique values of a field in the data received from the provider, as well as the specific data point selected by the user.

#### Arguments:

A provider column name, followed by the corresponding consumer column name, followed by the consumer column name that corresponds to the data points in the provider. Arguments must be enclosed in quotes and separated by a comma.

**Example:**

```
this.ConsumeData = lambda: FilterDataPoint("SalesPersonID", "SalesPersonID",  
"FiscalYear")
```

**GetData**

Use this function in any C1 consumer to assign the data received from the provider to the consumer data source. The consumer must have a data source schema that is compatible with the provider. You cannot assign the data to an uninitialized C1DataGrid Web Part, for example.

**Arguments:**

None.

**Example:**

```
this.ConsumeData = GetData
```

**InspectArguments**

Use this function in any C1 consumer during page development to view the additional arguments passed from the provider, if any. Currently, only C1Chart providers pass an additional argument representing the data point.

**Arguments:**

None.

**Example:**

```
this.ConsumeData = InspectArguments
```

**InspectData**

Use this function in any C1 consumer during page development to view the structure of the data received from the provider. If multiple rows are passed, only the first row is displayed. This is the default behavior for all consumer connections.

**Arguments:**

None.

**Example:**

```
this.ConsumeData = InspectData
```

## Provider Event Handlers

When two C1 Web Parts are connected and the user triggers a provider event that the consumer is configured to accept, the default action for the provider is to send the appropriate collection of data rows to the consumer. Note that the provider always sends a collection of rows, even if there is only one.

Typically, you do not need to write any code to customize the provider's behavior. However, there are some cases where you might want to limit the number of rows that are sent or pass additional information to the consumer. To do so, you need to insert custom code in the **Text Entry** dialog box as you would for configuring a consumer event handler.

***ProvideData Event***

This event is called to pass the current data view to the consumer when the user sorts or filters a C1DataGrid Web Part. The default implementation is equivalent to this line of code:

```
this.ProvideData = lambda args: this.SendData()
```

In most cases, you will not need to handle this event, but if the provider's data source has many rows, you may choose to limit the number of rows sent to the consumer. You can add a numeric argument to the SendData function to specify the maximum number of rows to send (10 in the following example):

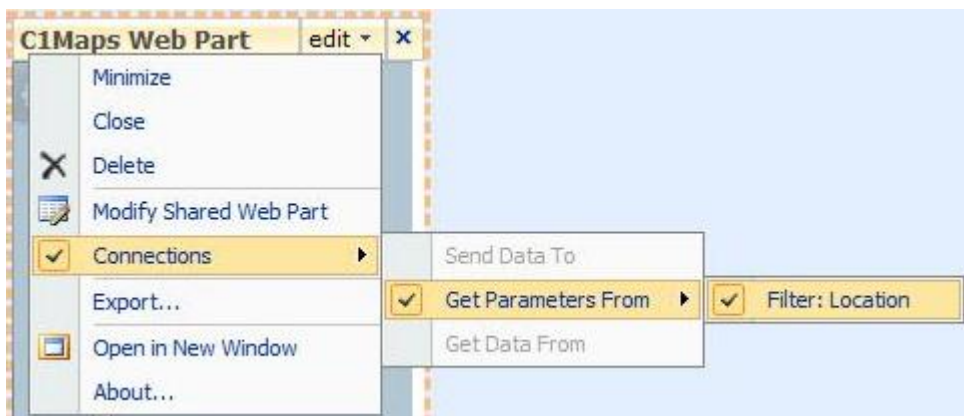
```
this.ProvideData = lambda args: this.SendData(10)
```

The lambda expression on the right side of the assignment statement defines an anonymous function to use as the event handler. This example can also be expressed with a named function definition as follows:

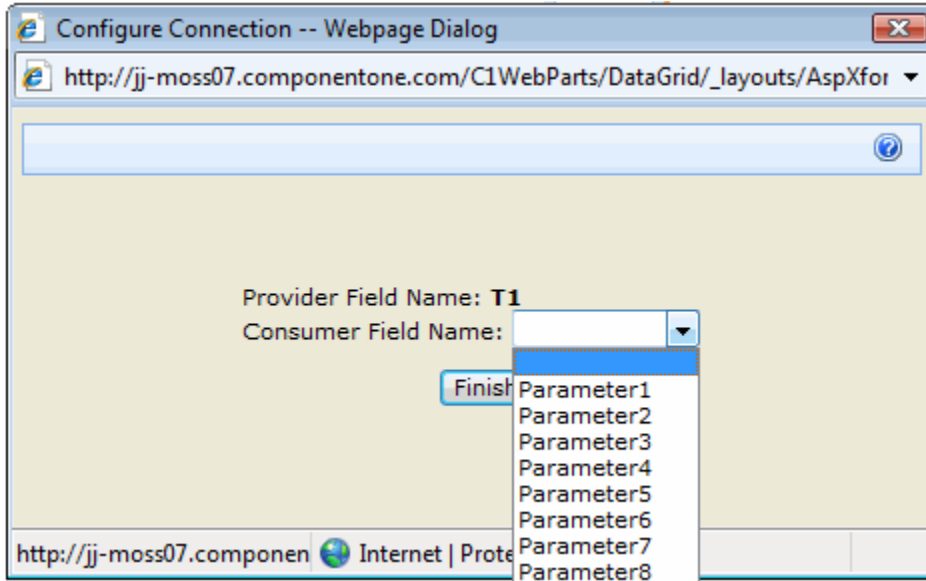
```
def myProvider(args):  
    return this.SendData(10)  
this.ProvideData = myProvider
```

## Connecting ComponentOne Web Parts to SharePoint Web Parts

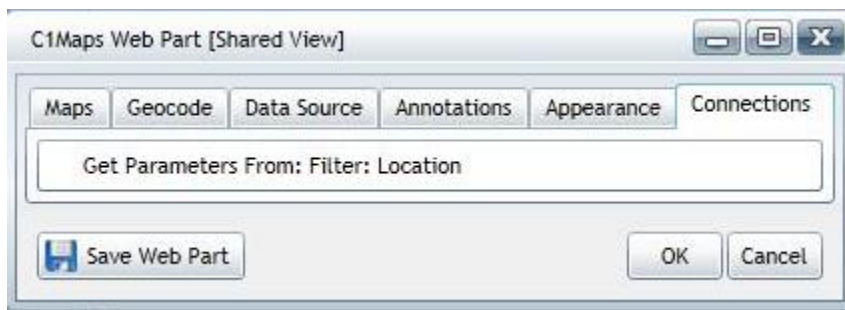
C1 Web Parts can receive data from some SharePoint Web Parts, such as text filters. To create a connection between Web Parts, the page must be in edit mode. Click the **Site Actions** menu and select **Edit Page**. Note that this option will be disabled for pages that you do not have permission to edit. Next, click the **edit** button **edit** and choose **Connections**.



You will be prompted to associate fields in the provider Web Part with parameters in the consumer Web Part. Since you can connect ComponentOne Web Parts before defining their data sources, you will need to select a named parameter (Parameter1 through Parameter8) to receive the value of each provider field.



Once the connection is made, you can view the connection in the **Connections** tab of the Web Part's On-Board Designer.



Unlike C1 Web Part-to-C1Web Part connections, there is nothing to select or change in the **Connections** tab for a parameters connection, nor is there a default consumer action. However, you do need to use the code window to do something meaningful with the parameter values, as the following example illustrates.

## Example

### Page Filter Parameters

This example shows how to consume parameter values from filter Web Parts such as the built-in **Text Filter Web Part**. First, put the page into edit mode and then connect a filter Web Part (provider) to a C1Maps Web Part (consumer). You will be prompted for the mappings between the provider columns and the consumer parameters (named Parameter1 through Parameter8). In order to act upon the parameter values, you will have to write start-up code similar to the following, which passes the value of Parameter1 (if specified) to the GeocodeCenter function of a C1Maps Web Part. If the text entered by the end user into the filter Web Part is a valid place name, street address, zip code, or other location string, the map will center itself about the resulting point. This example assumes that the **Geocode** tab in the On-Board Designer for C1Maps has been properly configured.

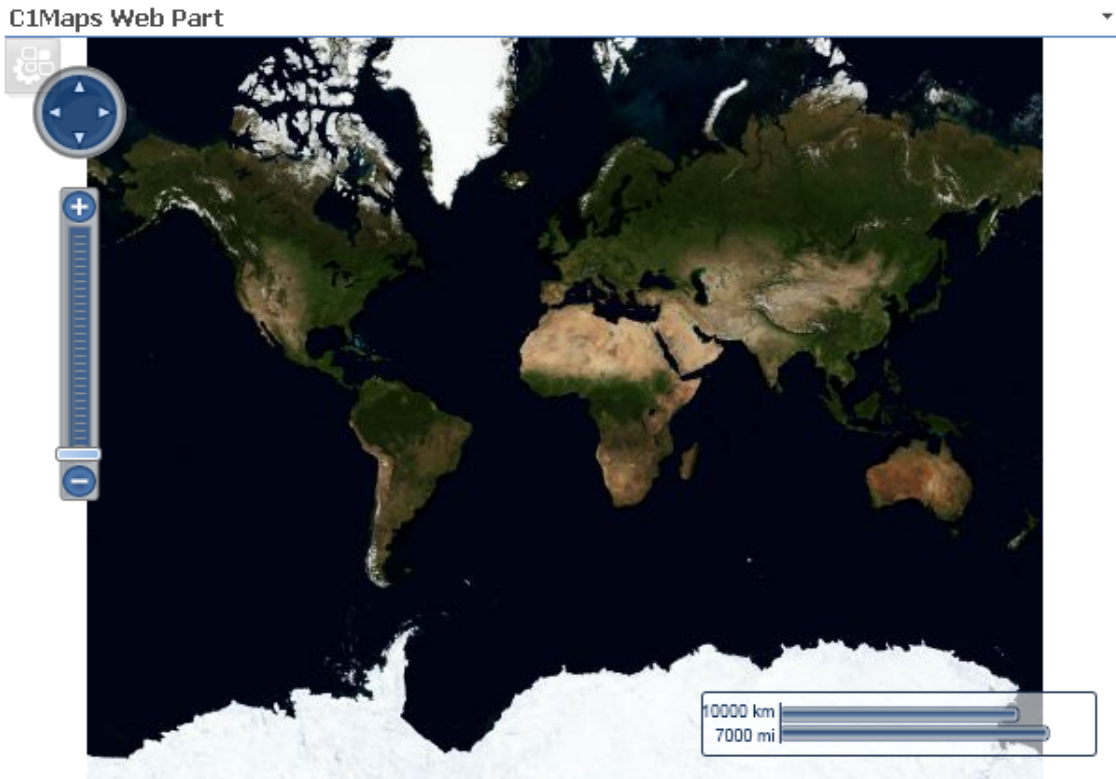
```
if this.Parameter1 != None:
    this.GeocodeCenter(this.Parameter1)
```





# C1Maps Web Part

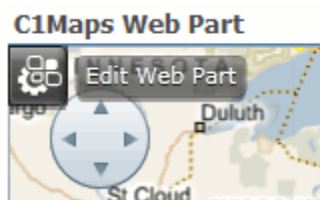
The C1Maps Web Part displays highly-detailed maps from Microsoft Bing™ Maps, providing a rich, interactive user experience. Choose from a variety of different map views, and you can even choose to include your own annotations retrieved from a SharePoint list, SQL Server® table, Excel® file, or Oracle® database.

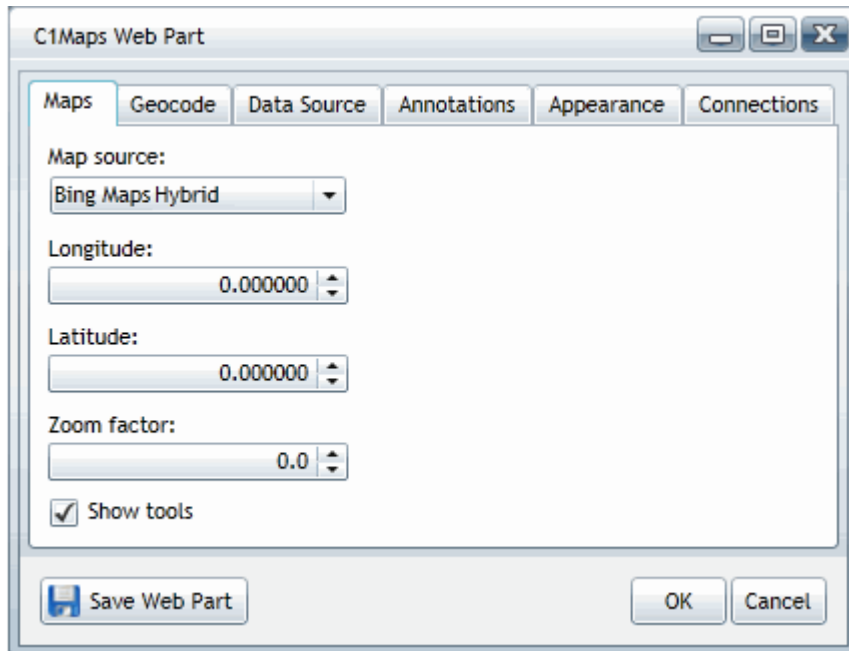


## C1Maps Web Part Configuration Properties

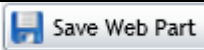



The C1Maps Web Part configuration properties allow you to choose a map display, specify a location by longitude and latitude coordinates, specify a zoom factor, and select the SharePoint list, SQL Server table or view, Excel file, or Oracle database used to retrieve your annotations if you would like them included on the map. You can also control the appearance and editing control of your Web Part (for more information, see [Setting Properties Using the C1 Web Part Appearance Tab](#) on page 20.)

By clicking the icon in the upper left corner of the C1Maps Web Part, you can access the On-Board Designer.



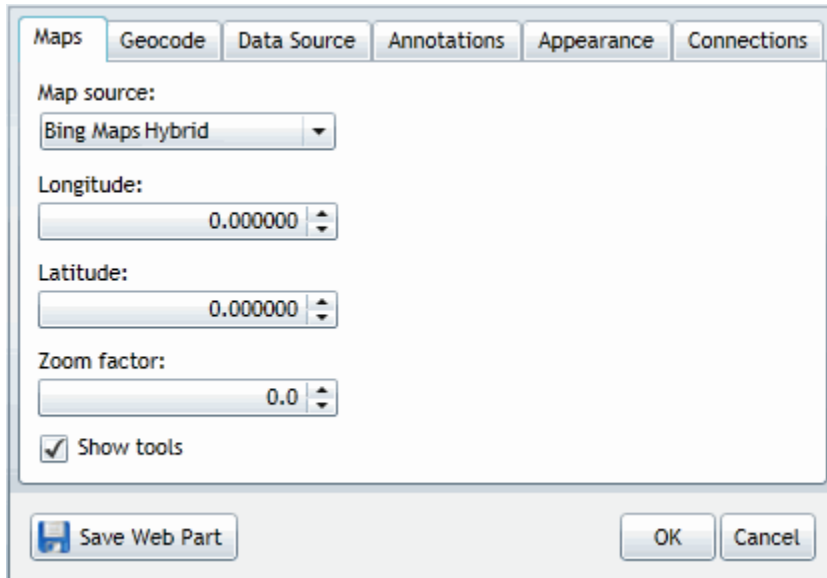


The following table describes the buttons in the designer.

Button	Description
	The <b>Save Web Part</b> button updates the running web part instance and saves the web part's properties to the SharePoint server for future page visits. Clicking this button implicitly performs the OK action before persisting the properties. This button closes the editor.
	The <b>OK</b> button updates the running web part instance but does not save the changes for future page visits. This allows users to test their changes before saving them. This button closes the editor.
 	The <b>Cancel</b> and <b>Close</b> buttons close the editor without updating anything. If the editor is reopened, its controls are reset to the last saved state. These buttons close the editor.

## Setting the Initial Map Display

The **Maps** properties allow you to specify the type of map to display, the default latitude and longitude coordinates of your map when it is initially shown, how magnified the map appears, and whether the scale and zoom tools should be displayed on the map.



### Map source

To change the map view, simply click the drop-down arrow under **Map source** and choose one of the map types from the list. *Bing Maps Hybrid* is the default display.

Microsoft Bing™ Maps has commercial and non-commercial licensing options available; see <http://www.microsoft.com/maps/product/licensing.aspx> for more information.

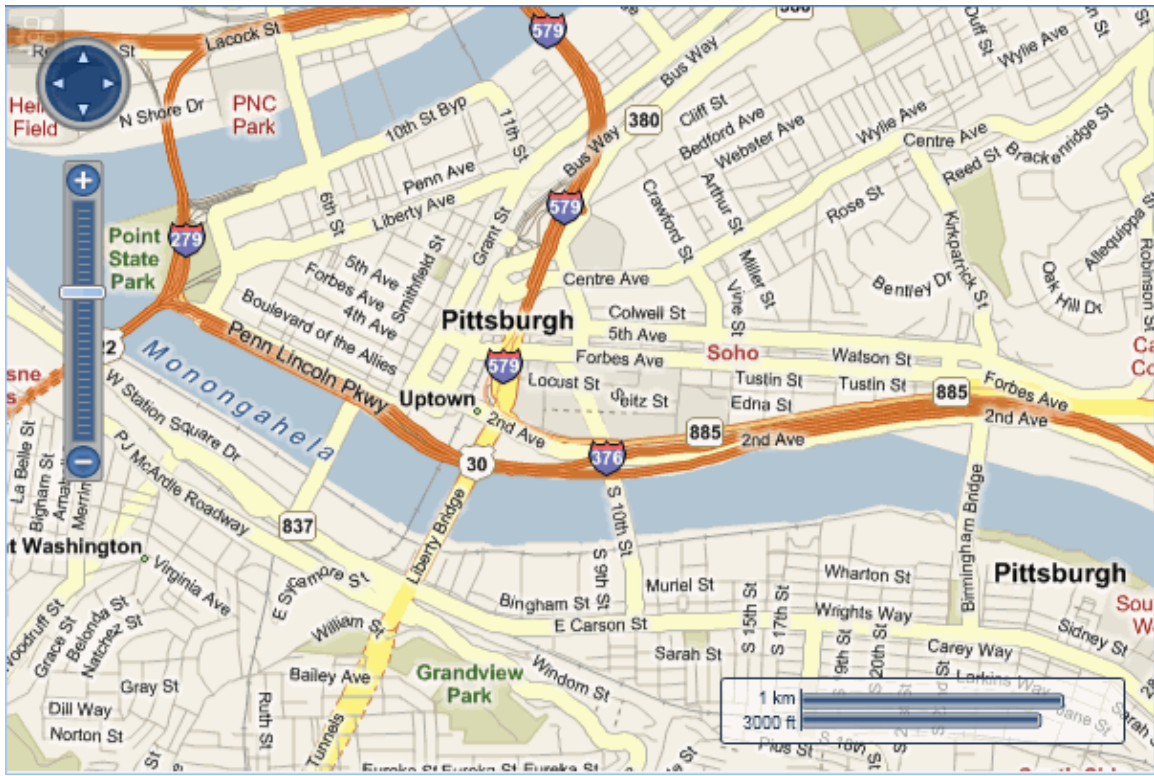
- **Bing Maps Aerial**

Displays an aerial satellite view of a location.



- **Bing Maps Road**

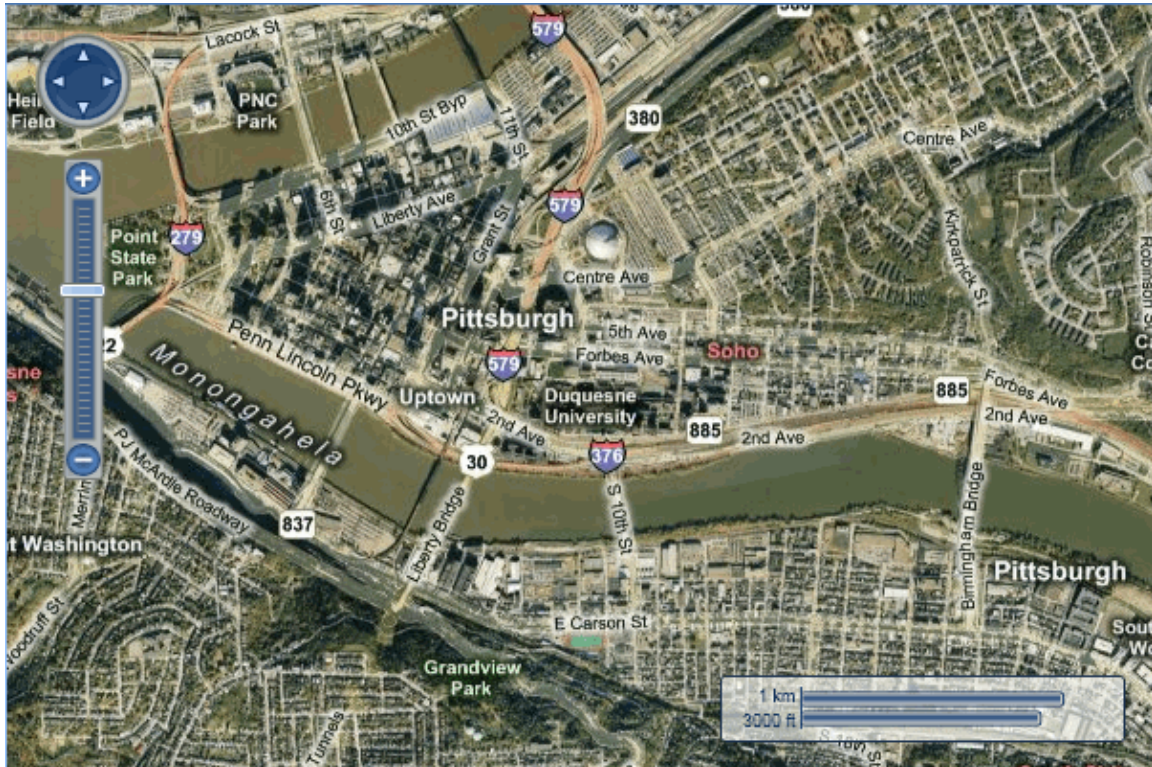
Displays a road map view of a location.





- **Bing Maps Hybrid**

Displays a combination aerial satellite and road map view of a location.



### Longitude and Latitude

To change the coordinates, use the arrows on the **Latitude** and **Longitude** list boxes or enter a new coordinate.

### Zoom factor

You can determine how magnified the map appears using the **Zoom factor**. Use the arrows or enter a new zoom number in the **Zoom factor** list box.

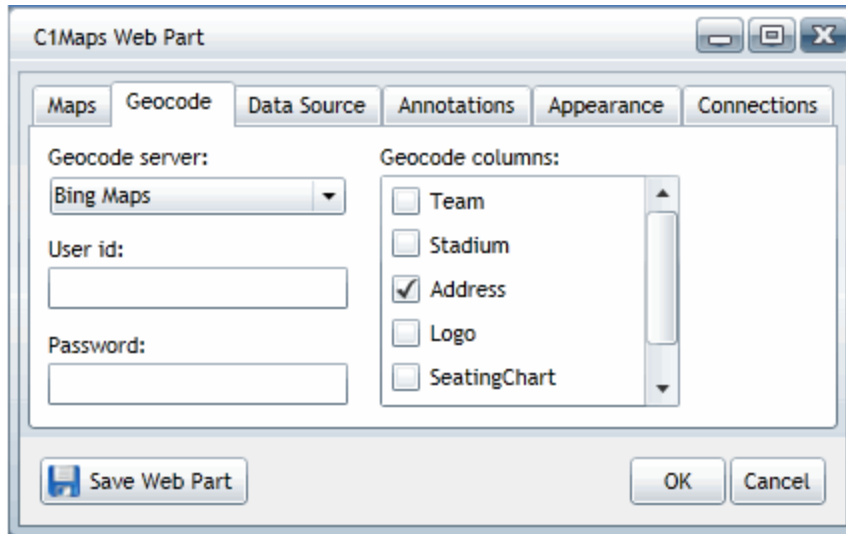
### Show tools

Check the **Show tools** check box to show the direction and scale/zoom tool on the map. The direction tool allows users to move across the right, left, top, or bottom of the map. The scale/zoom tool allows users to zoom in or out, increasing or decreasing the magnification of the map.

## Configuring C1Maps for Geocoding

If you are using numeric latitude and longitude for your map annotations, you would set the latitude/longitude columns in the **Data Source** tab. (See [Setting the Initial Map Display](#) on page 46 and [Setting the C1Maps Data Source](#) on page 50.) However, if you would like to set your geographic coordinates using street addresses, zip codes, etc., you could do so using the Bing Maps server specified in the Geocode tab. You must have a Bing Maps license to take advantage of this feature.

Microsoft Bing™ Maps has commercial and non-commercial licensing options available; see <http://www.microsoft.com/maps/product/licensing.aspx> for more information.



### Using Geocode in C1Maps

To specify Geocode server credentials, complete the following steps:

1. In the **Geocode server** field, choose **Bing Maps** from the drop-down.
2. Enter your Bing Maps **User id** and **Password**.
3. Click **Save Web Part**.

To specify Geocode columns for annotation markers, complete the following steps:

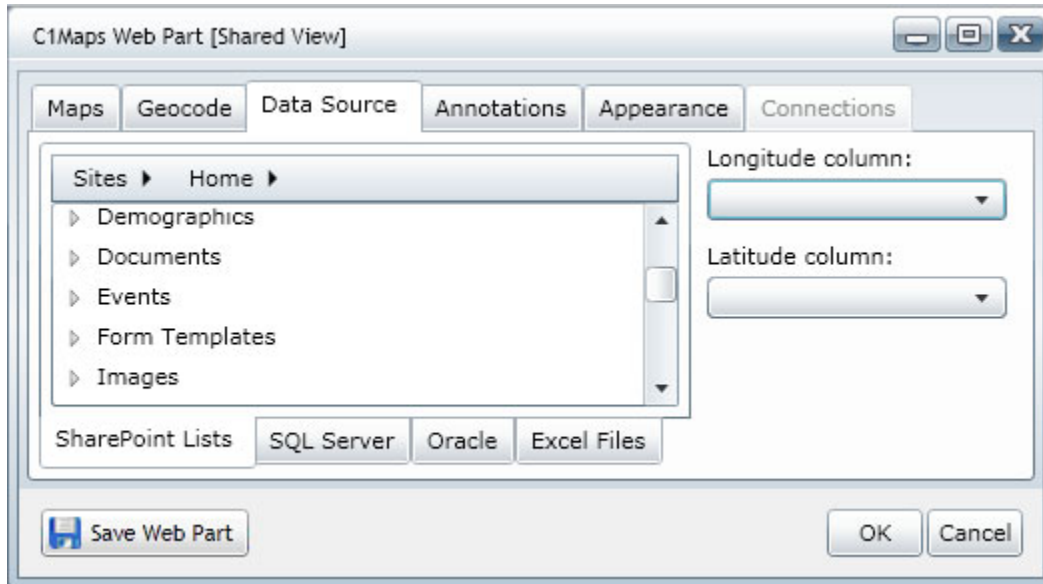
1. On the **Data Source** tab, configure a SharePoint list, SQL Server, Excel file, or Oracle data source.
2. On the **Geocode** tab, select the desired check boxes in the **Geocode columns** area in the appropriate order (for example: Address, City, State, Zip).
3. Click **Save Web Part**.

If you specify server credentials but not a data source, you can use geocoding to center the map. For example, you can connect a C1DataGrid Web Part containing addresses to a C1Maps Web Part, configure the connection to handle row selection, then write an event handler to geocode the appropriate field(s).

If you do specify a data source and select one or more columns in the Geocode tab, then the geocode server will be called for each item in the data source to determine the location of the corresponding annotation marker. Note that you do not need to have a full street address to take advantage of this feature. You can use combinations of postal codes, city/region/country fields, or place names.

### Setting the C1Maps Data Source

A SharePoint list, SQL Server table or view, Excel file, or Oracle database can serve as your data source and contain any annotations that you would like to appear on your map. Using the **Data Source** section of the C1Maps Web Part On-Board Designer, you can choose a source list or database and specify the columns that contain your notes, as well as the exact location they should appear on the map.



See the following for information about connecting to a specific data source:

[Using a SharePoint List Data Source](#) on page 23

[Using a SQL Server Table Data Source](#) on page 25

[Using an Excel File Data Source](#) on page 28

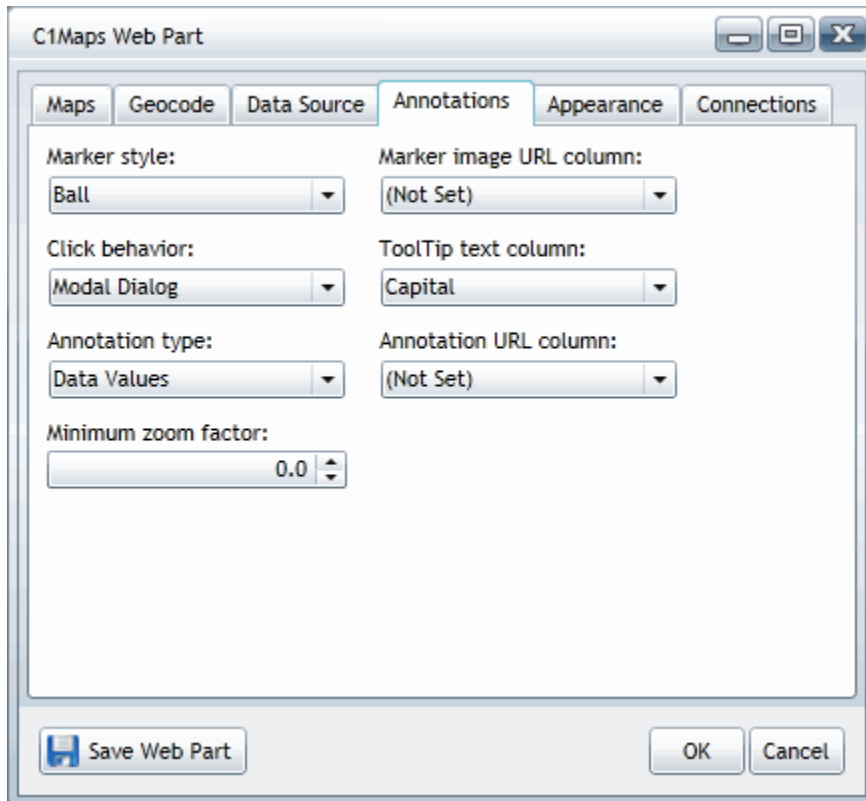
[Using an Oracle Data Source](#) on page 30

After the data source is selected:

1. Click the drop-down arrow under **Longitude column**. All of the columns in your SharePoint list are listed. Select the column to be used to specify longitude coordinates on the map. If you would prefer to use geocoding, choose **Not Set** from the drop-down. (See [Setting the C1Maps Geocode](#) on page 49.)
2. Click the drop-down arrow under **Latitude column**, and select the column to be used to specify latitude coordinates on the map. If you would prefer to use geocoding, choose **Not Set** from the drop-down. (See [Setting the C1Maps Geocode](#) on page 49.)

## Formatting Annotations

Using the **Annotations** properties of the On-Board Designer, you can control the display of marker symbols on the map surface, the click behavior of these markers, and the contents of dialog windows that optionally open when the user clicks a marker.



### Marker style

This property determines the symbol to use for the markers that indicate annotations on the map. Built-in markers include *Ball*, *Ball Pin*, *Flag*, *Push Pin*, and *Star*.

### Click behavior

This property determines the behavior of the window that displays your annotation. Choose *Modal Dialog*, *Modeless Dialog*, or *No Action*.

### Annotation type

This property determines the action and visual rendering, if any, to be used for all annotations. The available values are as follows:

<b>Data Values</b>	Displays a two-column table of field names and values for the underlying data object represented by the marker. This is the default setting.
<b>Image</b>	Displays the image specified by the <b>Annotation URL column</b> property.
<b>Internal Values</b>	Displays a two-column table of internal field names and values for the underlying data object represented by the marker. This setting is useful during page development for discovering the internal field names that must be used when writing custom code.
<b>Map Inset</b>	Displays a street map view of the same coordinate position as the marker.
<b>Navigation</b>	Navigates to the URL specified by the <b>Annotation URL column</b> property.
<b>None</b>	Use this setting to disable annotation windows during page development.

### Minimum zoom factor

This property specifies the minimum zoom factor at which marker symbols are displayed.



### Marker image URL column

This property specifies the data source column that provides image URLs to use in place of the built-in **Marker style** shapes. If the column values do not contain full URLs, you can use the code window to modify them (see [C1Maps Event Handlers](#) on page 53). Note that sites that serve images must have cross-domain policy files in place. Also, images must be .png, .jpg, or .gif files.

### ToolTip text column

This property specifies the data source column that provides the tooltip text associated with marker symbols on the surface of the map.

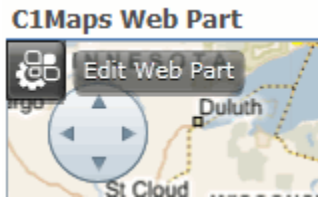
### Annotation URL column

This property specifies the data source column used as an argument for annotation types that require a URL (for example, *Image* or *Navigation*). If the column values do not contain full URLs, you can use the code window to modify them (see [C1Maps Event Handlers](#) on page 53 ). Note that sites that serve images must have cross-domain policy files in place. Also, images must be .png or .jpg files (but not .gif).

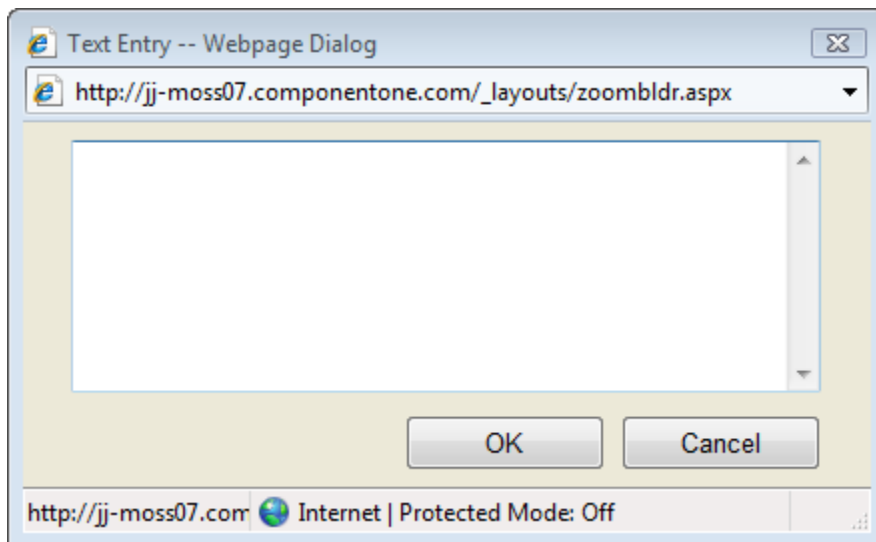
## C1Maps Event Handlers

You can create custom marker symbols and behaviors, tooltip strings, and other effects using **C1Maps Event Handlers**.

To do so, you need to insert custom code in the **Text Entry** dialog box. To open this dialog box, hover over the **Edit Web Part** icon and **Ctrl + Click**.



The **Text Entry** dialog box will open.



Type your code into the box provided, then click **OK**. Note that the **OK** button in the **Text Entry** dialog works like the **OK** button in the On-Board Designer. It lets you test your changes, but they will not be permanently saved unless you subsequently click the **Save Web Part** button in the On-Board Designer.

## Annotate Event

The **Annotate event** is called to override the rendering of a marker.

### Usage:

```
def myHandler(item, args):  
    # your code here  
  
this.Annotate = myHandler
```

### Arguments:

<b>item</b>	The underlying data object.
<b>args</b>	An object with properties that can be set to override the default behavior.

### Event argument properties:

<b>MarkerName</b>	This is a string that specifies the name of the built-in marker shape (with spaces removed) or the image URL (if any).
<b>ToolTipText</b>	This is the string to be displayed when the user hovers over the marker.

## AnnotationClicked Event

The **AnnotationClicked event** is called to override the click behavior of a marker.

### Usage:

```
def myHandler(item, args):  
    # your code here  
  
this.AnnotationClicked = myHandler
```

### Arguments:

<b>item</b>	The underlying data object.
<b>args</b>	An object with properties that can be set to override the default behavior.

### Event argument properties:

<b>Location</b>	This is a Point object that specifies the longitude (Location.X) and latitude (Location.Y) of the marker. Location may be None if a geocode operation did not return any results or the underlying data source has null-valued longitude/latitude columns.
<b>Handled</b>	Set this boolean property to True to suppress the display of the Dialog popup window.
<b>Url</b>	This is the string value of the <b>Annotation URL column</b> for this data item, if specified in the On-Board Designer.
<b>Dialog</b>	This is the Silverlight popup window (C1Window) used to display the annotation. The following table describes some of its default property settings, which you can change.

## Dialog properties:

<b>Width</b>	This is the width of the dialog in pixels. The default is 240.
<b>Height</b>	This is the height of the dialog in pixels. The default is 240.
<b>Header</b>	This is the string displayed as the caption in the dialog's title bar. The default is the same as the ToolTip text.
<b>Content</b>	This is the Silverlight UIElement that fills the inner content of the dialog. The actual type of the element depends on the annotation type specified in the On-Board Designer.

## Examples

This section includes example code you can use as a starting point for creating your own custom behaviors.

### Example 1

#### Variable Marker Symbols

This example shows how to display different built-in marker shapes based on the underlying data values. If the value of the ST column occurs in a predefined list of strings, then a different marker shape (Star) is used.

```
def original13(item, args):
    colonies =
    ["CT", "DE", "GA", "MA", "MD", "NC", "NH", "NJ", "NY", "PA", "RI", "SC", "VA"]
    if item.ST in colonies:
        args.MarkerName = "Star"
this.Annotate = original13
```

Here is another variation using a numeric expression:

```
def over40(item, args):
    if item.Latitude > 40:
        args.MarkerName = "BallPin"
```

### Example 2

#### Custom Marker Images

This example shows how to override the built-in marker shapes to display custom images based on the underlying data values. In the On-Board Designer, you must specify a value for the **Marker image URL column**. If this column contains an actual URL value, no coding is required. However, you can write code to convert the underlying value into a URL expression.

```
prefix = "http://helpcentral.componentone.com/states/"
def stateFlag(item, args):
    args.MarkerName = prefix + item.ST + ".jpg"
this.Annotate = stateFlag
```

This example specifies image URLs on an external site, which must have the appropriate cross-domain policy files in place. A more common usage would be to reference images that have been uploaded to a SharePoint picture library on the current site.

### Example 3

#### Custom ToolTip Strings

This example shows how to build a ToolTip string that uses the values from multiple data columns. This code will override the On-Board Designer setting for the **ToolTip text column** field.

```
def onToolTip(item, args):  
    args.ToolTipText = item.Capital + ", " + item.ST  
this.Annotate = onToolTip
```

### Example 4

#### Custom Marker Actions

This example shows how to write custom code that executes when the user clicks a marker. You can use this feature to alter the contents of the popup annotation window or to perform a completely different action. In this example, the annotation window is suppressed in favor of a message box that displays the longitude/latitude of the location that was just clicked.

```
def onClicked(item, args):  
    MessageBox.Show(args.Location.ToString())  
    args.Handled = True  
this.AnnotationClicked = onClicked
```

#### Tips:

Note that different programming techniques can be merged into one Annotate event handler. For example, the same function can set **args.ToolTipText** and **args.MarkerName**.

To determine the names of the underlying data columns, use the **Show as text** button in the **Criteria pane** of the **Data Source tab**. Or, for C1Maps, temporarily set the **Annotation type** setting to **Internal Values**, then click a push pin to see the result. For SharePoint lists, it is common to have names like "Column3" that are not surfaced through the browser UI.

# C1Maps Tutorial

This tutorial will walk you through the configuration of a C1Maps Web Part that will display a Bing map of the United States, including the capital of each state.

You can find the **State Capitals** list template that will be used in this tutorial at [http://www.componentone.com/newimages/products/files/sampledata.zip](http://www.componentone.com/newimages/products/files/sampleddata.zip). For more information on adding a list template to your SharePoint site's **List Template Gallery**, see [Adding a Template to the List Template Gallery](#) on page 37. This template will be used to create the list of state capitals we will include on the map.

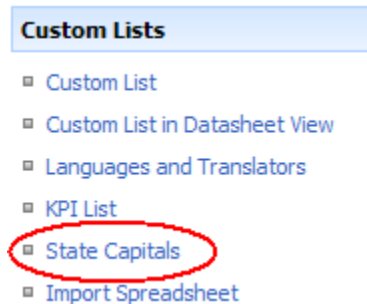
Live interactive tutorials are available on the ComponentOne Studio for SharePoint site. Go to the [ComponentOne SharePoint Demo Site](#) to try out all of the Web Parts on a live SharePoint site. The **User name** and **Password** are: sitevisitor.

**Note:** This tutorial assumes you already have a SharePoint site and have permissions to create lists and edit pages. It also assumes you have installed and are able to view the ComponentOne Web Parts. For additional information, see [Installing ComponentOne SharePoint Web Parts](#) on page 1.

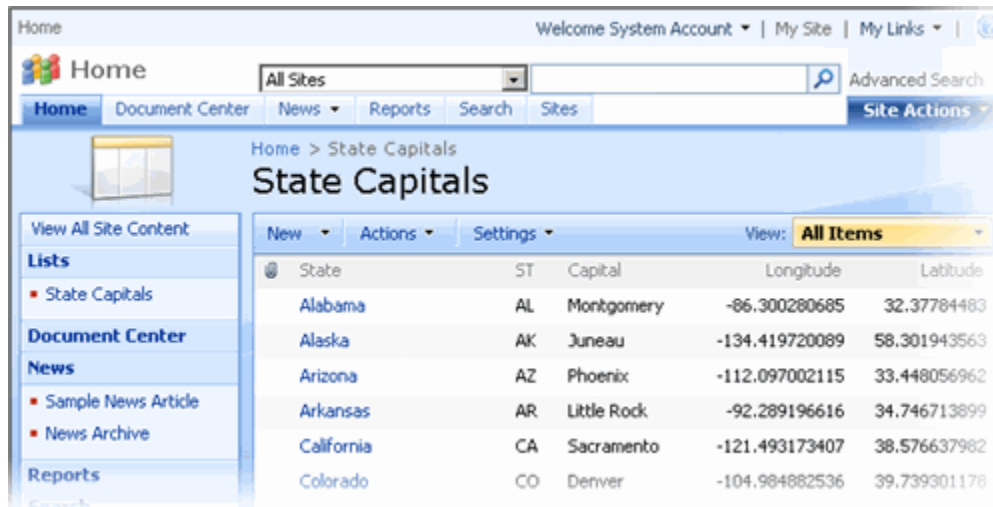
## Step 1 of 4: Create an Annotation List

We will start by creating an annotation list in your site using the State Capitals list template.

1. On the Home page of your SharePoint site, click **View All Site Content**.
2. Click the **Create** button at the top of the **All Site Content** page. The **Create** page appears.
3. Click **State Capitals** under the **Custom Lists** column. This template will be used to create your new page.



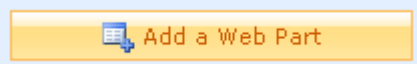
4. Enter **State Capitals** in the **Name** text box and click **Create**. The list appears. Notice the columns: *State*, *ST*, *Capital*, *Longitude*, and *Latitude*.



## Step 2 of 4: Adding a C1Maps Web Part

Next we are going to create a page with a C1Maps Web Part.

1. Click **Site Actions** | **Create Page** in the upper right corner of your site. The **Create Page** page appears.
2. Enter **C1Maps Tutorial** in the **Title** text box.
3. Select **(Welcome Page) Blank Web Part Page** from the list of page layouts and click **Create**. Notice that all areas of the page where you can add a Web Part have an **Add a Web Part** button



4. Click the **Add a Web Part** button under **Top Left**. The **Add Web Parts** dialog box appears.
5. Scroll the items in the dialog box to locate **ComponentOne Web Parts**, and check the checkbox next to **C1Maps Web Part**.
6. Click **Add** to close the dialog box. The C1Maps Web Part now appears in the top left section of the page.

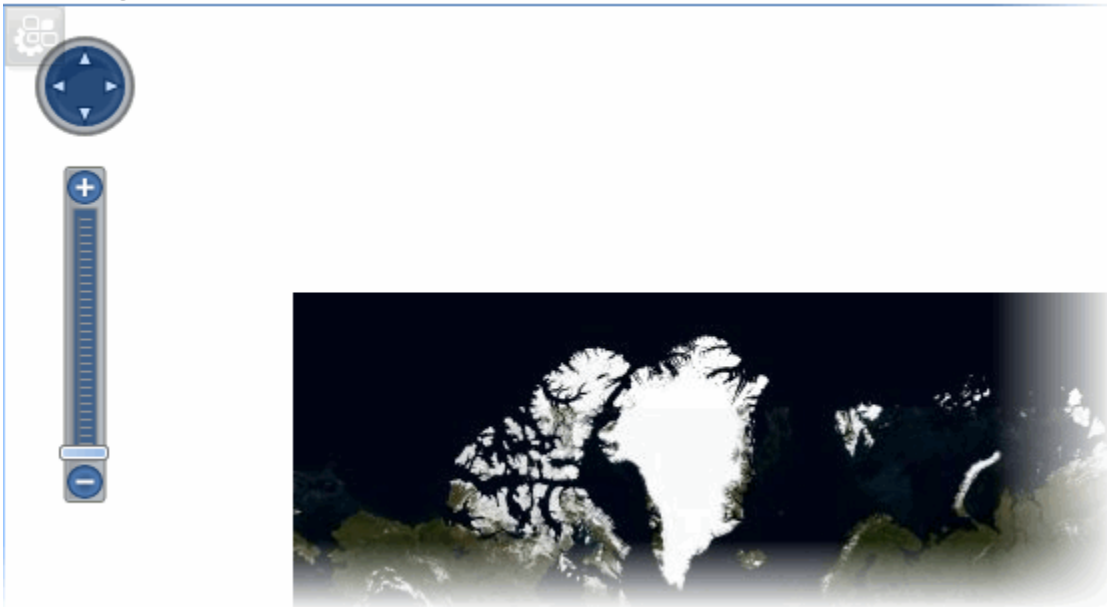


### Step 3 of 4: Setting C1Maps Web Part Properties

Let's increase the size of the Web Part so more of the map will be visible.

1. Click the **edit** button in the upper right corner of the C1Maps Web Part and select **Modify Shared Web Part**. The C1Maps Web Part On-Board Designer appears to the right of the Web Part.
2. With the **Appearance** node expanded, enter **800** next to **Yes** under **Height**.
3. Enter **800** next to **Yes** under **Width**. Note that the changes are not reflected until you click **OK** or **Apply**.
4. Next to **Title**, change the name of the Web Part to **State Capitals**.
5. Select **OK** to close the properties list. The size and title of the Web Part now reflect the changes that you made.

## State Capitals

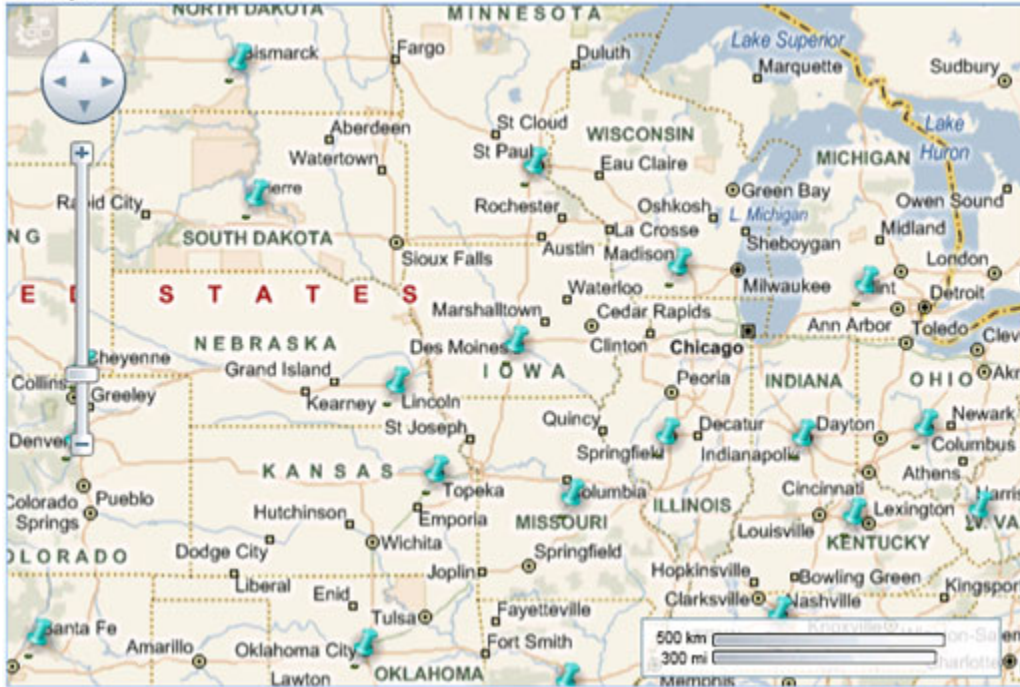


### Step 4 of 4: Configuring the C1Maps Web Part

Now we can configure the Web Part to display a specific map and use our new list to put the state capitals on the map.

1. Click the C1Maps Web Part Properties icon in the top left corner of the Web Part. The C1Maps Web Part On-Board Designer opens.
2. Under **Maps**, click the **Map Source** drop-down arrow and select **Bing Maps Road**.
3. Under **Data Source**, click **Sites** and select **Home** or the name of your site. You can use the **Sites** menu to select the name of your site or to navigate to other sites within the site collection. Click **More** to type the URL of a different site. Note that if there are multiple sites with the same name, you can hover over the name to see the full URL of the site. When you select a site, all of its lists are shown below the **Sites** menu.
4. Scroll the list and select **State Capitals**.
5. Click the drop-down arrow under **Longitude column** and select **Longitude**.
6. Click the drop-down arrow under **Latitude column** and select **Latitude**.
7. Click the drop-down arrow under **Description column** and select **Capital**.
8. Under **Location**, set the **Longitude** to -93.603829 and set the **Latitude** to 41.591203. This will center the map using the coordinates for Des Moines, Iowa.
9. Set the **Zoom factor** to 4.
10. Under **Annotations**, select **Push Pin** for the **Style**.
11. Click **Save Web Part**. Your map will appear, and each state capital is labeled.





Congratulations, you have successfully completed this tutorial!



# C1DataGrid Web Part

The C1DataGrid Web Part provides a rich, scrollable grid to display your SharePoint lists, SQL Server® tables, Excel® files, or Oracle® databases. Users can work with the grid interactively: they can group, move, filter, resize, and sort columns; edit and add rows; and resize rows.

C1DataGrid Web Part

Capital	Longitude	Latitude	ST
Montgomery	-86.300280684889	32.3778448300578	AL
Juneau	-134.419720089079	58.3019435628538	AK
Phoenix	-112.097002114648	33.448056962118	AZ
Little Rock	-92.2891966155731	34.74671389912	AR

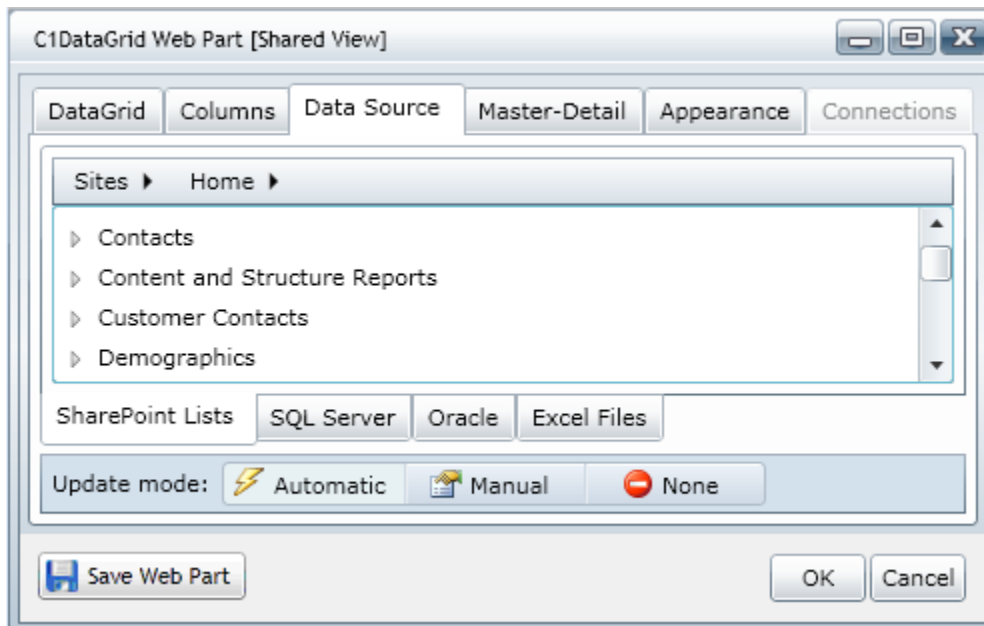
  

Institution	Rank	State	2007 Endowment	2006 Endowment	% Change
-------------	------	-------	----------------	----------------	----------

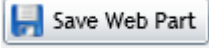



## C1DataGrid Web Part Configuration Properties

The C1DataGrid Web Part On-Board Designer allows you to select a SharePoint list, SQL Server table or view, Excel file, or Oracle database to display in a grid view. You can also set up your grid to display hierarchical data here. In addition, you can control the appearance and editing control of your Web Part (for more information, see [Setting Properties Using the C1 Web Part Appearance Tab](#) on page 20.)

By clicking the icon in the top left corner of the C1DataGrid Web Part, you can access the C1DataGrid Web Part On-Board Designer.

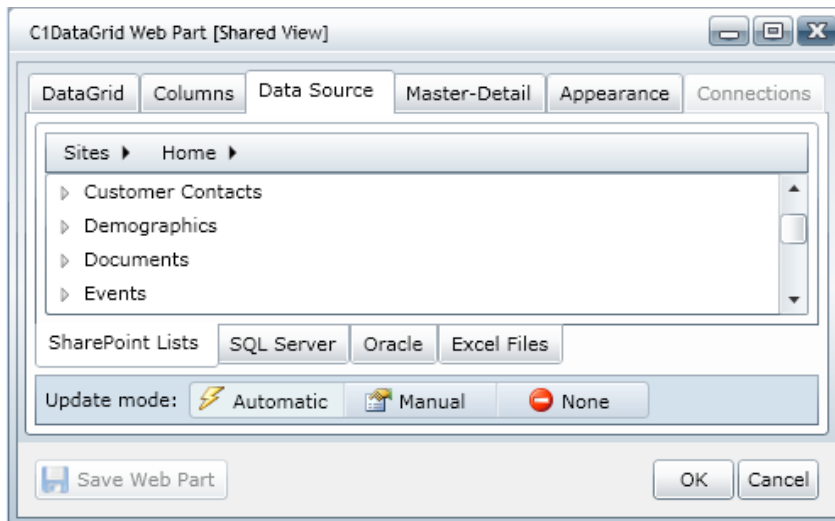


The following table describes the buttons in the designer.

Button	Description
	The <b>Save Web Part</b> button updates the running web part instance and saves the web part's properties to the SharePoint server for future page visits. Clicking this button implicitly performs the OK action before persisting the properties. This button closes the editor.
	The <b>OK</b> button updates the running web part instance but does not save the changes for future page visits. This allows users to test their changes before saving them. This button closes the editor.
 	The <b>Cancel</b> and <b>Close</b> buttons close the editor without updating anything. If the editor is reopened, its controls are reset to the last saved state. These buttons close the editor.

## Setting the C1DataGrid Data Source

A SharePoint list, SQL Server table or view, Excel file, or Oracle database can serve as your data source. Using the **Data Source** section of the C1DataGrid Web Part On-Board Designer, you can choose a source list or database.



See the following for information about connecting to a specific data source:

[Using a SharePoint List Data Source](#) on page 23

[Using a SQL Server Table Data Source](#) on page 25

[Using an Excel File Data Source](#) on page 28


[Using an Oracle Data Source](#) on page 30

For all data sources, the **Update Mode** is used to set how the grid data will be updated when edited (or you can use it to disable editing). See [Editing Cells and Adding Rows](#) on page 73 for more information about editing cells.

Button	Description
Automatic	Any changes will be applied as soon as you move away from the cell.
Manual	Changes will not be applied until you click the <b>Save Changes</b> button at the bottom of the Web Part.
None	Editing is disabled.

## Displaying a Hierarchical Grid

The C1DataGrid Web Part supports the ability to display hierarchical data, or a master-detail grid. Hierarchical data generally refers to data that is stored in multiple relational tables, where a master, or "parent", table is linked by key fields to detail, or "child", tables. The hierarchical display provides the ability to present the master data to users, such that the related detail data can be viewed in the same grid with a single mouse click. Note that master-detail grids can relate SQL Server data to SharePoint lists and vice versa. For example, your parent table may be from a SQL Server table or view, while your child table is from a SharePoint list.

If a detail grid exists, you'll see a drop-down arrow in the record selector column for each row with a detail grid .

With proper permissions, grids can be edited. Click the **Click here to add new row** button at the bottom of the grid to add a new row; double-click within the cell to edit an existing field. See [Editing Cells and Adding Rows](#) on page 73 for more information.

### To enable a master-detail grid display:

1. Click the icon in the top left corner of the C1DataGrid Web Part to open the On-Board Designer.
2. Under **Data Source**, click the **SharePoint Lists** tab. Use the **Sites** menu to select the name of your site or to navigate to other sites within the site collection. Click **More** to type the URL of a different site. Note that if there are multiple sites with the same name, you can hover over the name to see the full URL of the site. When you select a site, all of its lists are shown below the **Sites** menu. Note that you can also use a SQL Server table or view.
3. Scroll the list and select the desired list. This list will populate the master grid.
4. Click the **Master-Detail** tab.
5. Select a detail list from either the **SharePoint Lists** tab or **SQL Server** tab. This list will populate the detail grid that will appear within the master grid.
6. Click the **Enable master-detail view** checkbox. Note that the master-detail view will not appear in the grid unless this checkbox is checked.
7. Click the drop-down arrow under **Master column**, and select a column from the master list.
8. Click the drop-down arrow under **Detail column**, and select a column from the detail list.
9. Under **Display related columns**, select one of the following options:

<b>All</b>	Displays all columns for both tables or views. This is the default value.
<b>None</b>	Displays no columns.
<b>Master Only</b>	Displays the specified master column only.
<b>Detail Only</b>	Displays the specified detail column only.

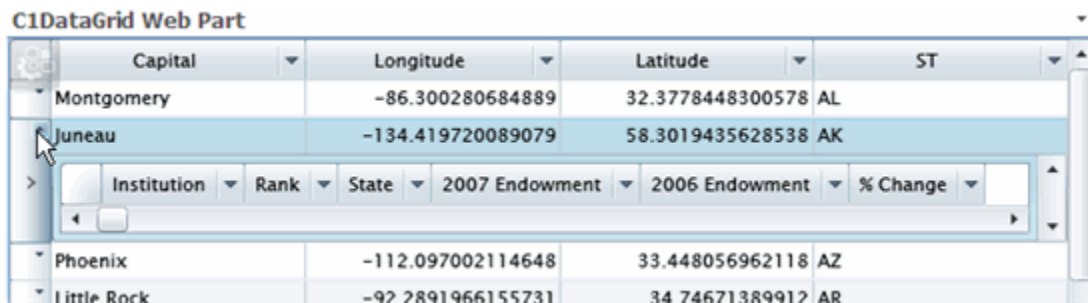
10. To allow grouping, under **Allow grouped columns**, select one of the following options:

<b>All</b>	Allows all columns to be grouped. This is the default value.
<b>None</b>	Disables grouping.
<b>Master Only</b>	Allows only columns in the master grid to be grouped.
<b>Detail Only</b>	Allows only columns in the detail grid to be grouped.

**Note:** The master grid supports grouped columns even if you do not specify a detail data source. See [Grouping Columns](#) on page 72 for more information on grouping.

11. Click **OK** to close the properties window.

12. In the C1DataGrid Web Part, click the drop-down arrow in a grid row. The detail grid is displayed below the row.



For all data sources, the **Update Mode** is used to set how the grid data will be updated when edited (or you can use it to disable editing). See [Editing Cells and Adding Rows](#) on page 73 for more information about editing cells.

Button	Description
Automatic	Any changes will be applied as soon as you move away from the cell.
Manual	Changes will not be applied until you click the <b>Save Changes</b> button at the bottom of the Web Part.
None	Editing is disabled.

## Setting the DataGrid and Column Appearance and Behavior

You can set the appearance and behavior of your entire Grid or individual Columns. This is done using the **DataGrid** and **Columns** tabs. For information on sorting, moving, filtering and grouping columns, see [Working with Columns](#) on page 70.

**To set the grid appearance and behavior:**

1. Click the icon in the top left corner of the C1DataGrid Web Part to open the On-Board Designer.
2. Click the **DataGrid** tab. Click the **Master** button.

You can also set the appearance and behavior of the detail grid. A master-detail relationship must first be set in the **Master-Detail** tab (see [Displaying a Hierarchical Grid](#) on page 65) to view and specify **Detail** fields.

3. Set the appearance and behavioral options as desired. These options will be available for both Master and Detail.

<b>Appearance</b>	
Column Width	The default column width. (Can be set for each column individually in the <b>Columns</b> tab.)
Row Height	The default row height.
Frozen Columns	The number of columns that the user cannot scroll horizontally.
Frozen Top Rows	The number of rows on top that the user cannot scroll vertically.
Frozen Bottom Rows	The number of rows at the bottom that the user cannot scroll vertically.
<b>Behavior</b>	
Allow Sorting	If selected, sorting of columns is enabled.
Allow Filtering	If selected, filtering of columns is enabled.
Allow Column Freezing	If selected, the user can drag the column divider to freeze more/fewer columns than those specified in the <b>Frozen Columns</b> field. If not selected, column freezing is controlled by the <b>Frozen Column</b> setting.
Allow Column Moving	If selected, columns may be moved.
Allow Column Resizing	If selected, columns may be resized.
Allow Row Resizing	If selected, rows may be resized.
Allow Grouping	If selected, columns may be grouped.
Toggle Grouped Rows	If selected, grouped rows may be expanded or collapsed.
Allow Update	If selected, data can be edited.
Allow Delete	If selected, data can be deleted from the grid.
Allow Add New	If selected, new rows can be added to the grid.

4. Click **OK**.

**To set the columns appearance and behavior:**

1. Click the icon in the top left corner of the C1DataGrid Web Part to open the On-Board Designer.
2. Click the **Columns** tab. Click the **Master** button.

You can also set the appearance and behavior of the detail grid's columns. A master-detail relationship must first be set in the **Master-Detail** tab (see [Displaying a Hierarchical Grid](#) on page 65) to view and specify **Detail** fields.

3. Set the appearance and behavioral options as desired. These options will be available for both Master and Detail.

The **Numeric** options will only appear for fields that contain numbers, such as currency. You can use the drop-down options, or enter standard numeric format strings instead. A full list is available here: <http://msdn.microsoft.com/en-us/library/dwhawy9k.aspx>.

The strings should be entered in this format: "Format specifier, precision specifier" – meaning that if you would like to use the currency format, and have two decimal places displayed (for example \$1,200.35), enter **C2**. You do not need to choose the drop-down.

**Common options:**

<b>Data</b>	
Header	Text that will display in the header of the column.
Column Name	The internal name of the column. (Not editable.)
<b>Appearance</b>	
Width	The width of the column.
Horizontal Alignment	The alignment of the text: Left, Center, Right, Stretch.
Vertical Alignment	The alignment of the text: Top, Center, Bottom, Stretch.
Visible	Visibility of the column.
Wrap Text	Text wrap in the column.
<b>Behavior</b>	
Allow Sorting	If selected, sorting of column is enabled.
Allow Filtering	If selected, filtering of column is enabled.
Allow Moving	If selected, moving of column is enabled.
Allow Resizing	If selected, resizing of column is enabled.
Allow Editing	If selected, editing of the column is enabled.
Allow Null Values	If selected, null values can be entered.
Edit on Selection	Column will become editable when the user selects it.
Group State	Group default setting: none, ascending, or descending.
Group Index	Order of column in grouping area.

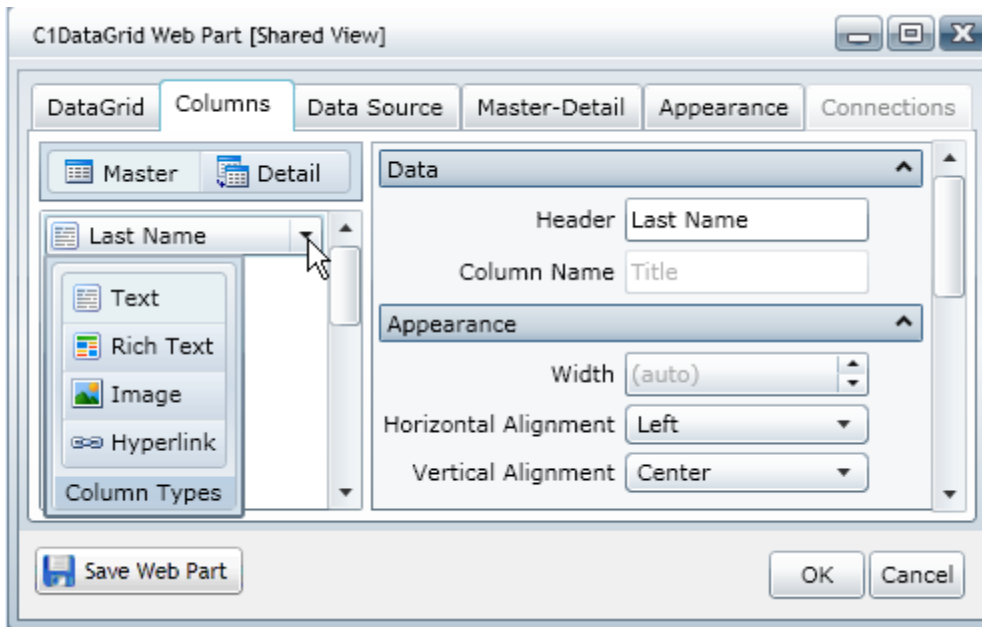
**Field-Specific options:**

<b>Numeric</b>	
Format	Choose one of the following, or enter the appropriate specifiers.
	Currency (specifier: C)
	Exponential (specifier: E)
	Fixed-Point (specifier: F)
	General (specifier: G)
	Numeric (specifier: N)
Show Buttons	If selected, increment/decrement buttons are displayed.
<b>Rich Text</b>	
Horizontal Scroll Bar	Specifies the display of the scroll bar (Hidden, Disabled, Auto, Visible)
Vertical Scroll Bar	Specifies the display of the scroll bar (Hidden, Disabled, Auto, Visible)
<b>Date/Time</b>	
Format	Specifies the date/time display (General; Short Date; Long Date; Long Date, Short Time; Long Date, Long Time; General Date, Short Time; General Date, Long Time; Short Time; Long Time; Month Day; Year Month )



<b>Hyperlink</b>	
Target Name	The name of the target browser window or frame for the hyperlink.
<b>Image</b>	
Stretch	Specifies how the image will be resized within the cell (Fill, None, Uniform, UniformToFill)

For string column types, you can change the column type by clicking a drop-down. The default is **Text**, but you can also choose **Rich Text**, **Hyperlink**, or **Image**.



4. Click **OK**.

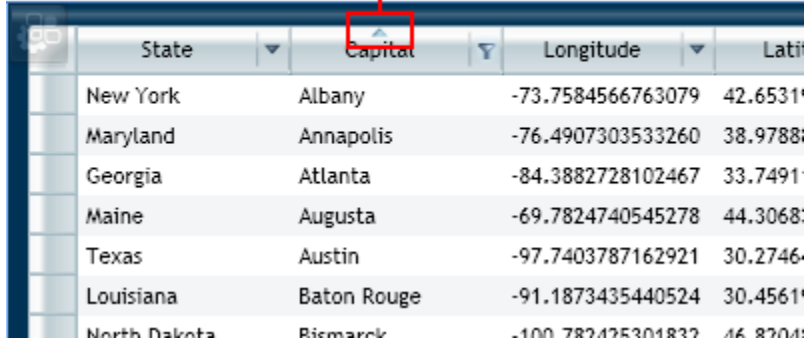
# Working with Columns

The following topics explain how to sort, move, resize, filter, and group columns within a grid.

## Sorting Columns

You can sort columns by clicking the column headers. Click a column header once and the sort indicator arrow appears in the column header to indicate the direction of the sort:

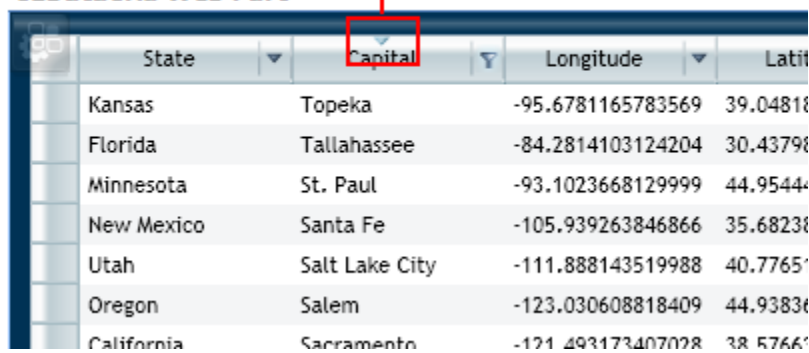
C1DataGrid Web Part Sort Indicator



State	Capital	Longitude	Latitude
New York	Albany	-73.7584566763079	42.65311
Maryland	Annapolis	-76.4907303533260	38.97881
Georgia	Atlanta	-84.3882728102467	33.74911
Maine	Augusta	-69.7824740545278	44.30681
Texas	Austin	-97.7403787162921	30.27461
Louisiana	Baton Rouge	-91.1873435440524	30.45611
North Dakota	Bismarck	-100.782475301832	46.82011

Click the header again, and the sort and direction of the sort indicator are reversed:

C1DataGrid Web Part Sort Indicator



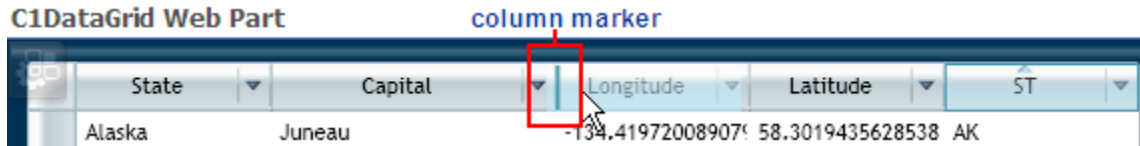
State	Capital	Longitude	Latitude
Kansas	Topeka	-95.6781165783569	39.04811
Florida	Tallahassee	-84.2814103124204	30.43791
Minnesota	St. Paul	-93.1023668129999	44.95441
New Mexico	Santa Fe	-105.939263846866	35.68231
Utah	Salt Lake City	-111.888143519988	40.77651
Oregon	Salem	-123.030608818409	44.93831
California	Sacramento	-121.493173407028	38.57661

## Moving Columns

You can move the columns displayed in the C1DataGrid Web Part by dragging the column headers to the desired locations.

### To move columns:

1. Select the column header you would like to move.
2. Drag the column header to left of the column where you would like it to appear. Notice the column marker appears bold. The selected column header will be moved the location of the marker.



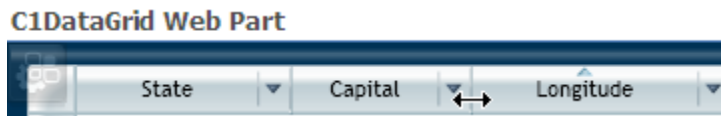
In the example shown in this image, the **ST** column will be moved to appear in front of the **Longitude** column.

## Resizing Columns

You can resize the columns displayed in the C1DataGrid Web Part by dragging the resizing arrow to the desired column width.

**To resize columns:**

1. Mouse over the divider at the right edge of the column header's filter button. The pointer changes to a horizontal double arrow.



2. Drag the divider to the right or left, making the column smaller or larger, respectively.


## Filtering Columns

You can filter columns using the filter buttons in the column headers. There are different filtering options, depending on the type of column.

Capital	Longitude	Latitude
Montgomery		
Juneau		
Phoenix		
Little Rock		
Sacramento	3173407028	
Denver	4882535635	

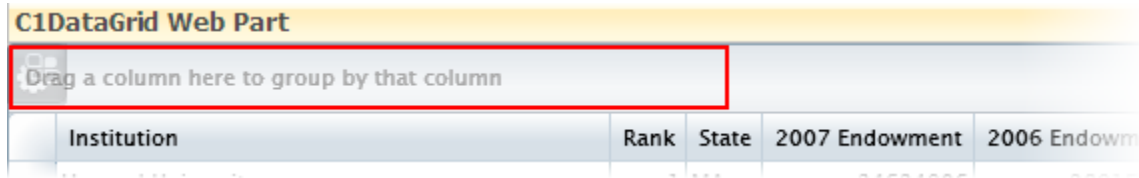
Longitude	Latitude
-86.3002806848	
-134.4197200890	
-112.0970021146	
-92.28919661557	
-121.4931734070	
-104.984882535635	39.7393011782883

**To filter columns:**

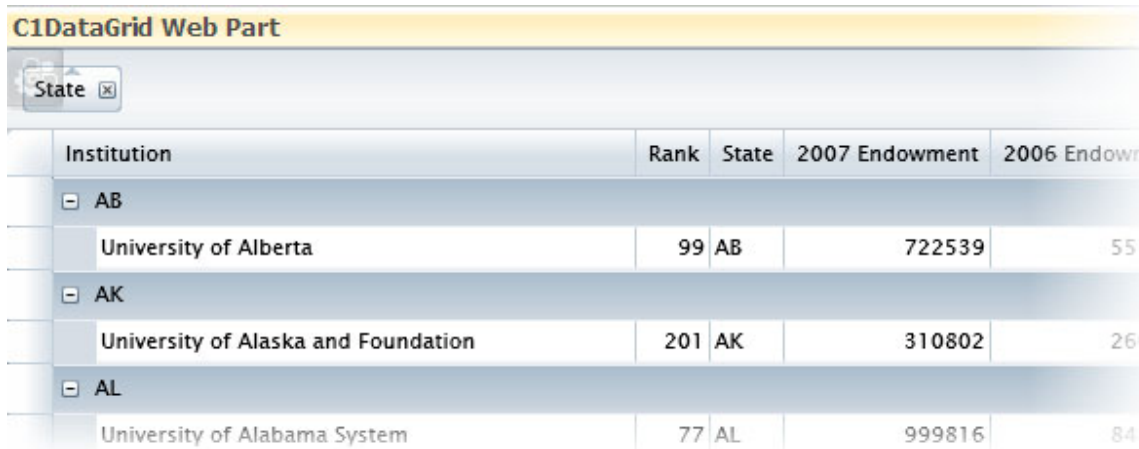
1. Click the filter button  to the right of the column you would like to filter.
2. Select the appropriate options.
3. Click **Filter**. To remove the filter, click **Clear**.

## Grouping Columns

The purpose of grouping is to allow users to dynamically configure a tree-view type structure. A grouping area is provided at the top of the grid, offering an intuitive interface for specifying column groups.



To start grouping, drag a column header to the grouping area.



When a column is first added to the grouping area, nodes are added to the grid; each node represents the unique value of the grouped column. Similarly, when the last grouped column is removed from the area, the nodes are removed and the display will be similar to the normal grid.

When the expand icon (+) is clicked, the grid expands and the next set of grouped data appears. If there is another grouped column, then this column has an expand icon next to it also. With the addition of each grouped column, another level of sorted information gets added to the tree view.

**Note:** Grouping is enabled, by default, for all columns in a hierarchical, or master-detail grid. Grouping may also be disabled, allowed for the master grid only, or allowed for the detail grid only. The master grid supports grouped columns even if you do not specify a detail data source. For more information on selecting a grouping option for a grid, see [Displaying a Hierarchical Grid](#) on page 65.

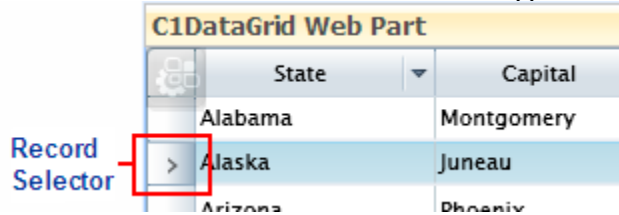
# Working with Rows

The following topics explain how to select and resize rows within a grid.

## Selecting Rows

You can select one row or a contiguous or non-contiguous range of rows.

If you mouse over the record selector for the row you want to select, then the entire row is highlighted. Simply click the record selector to select the row. An arrow will appear in the row's record selector.



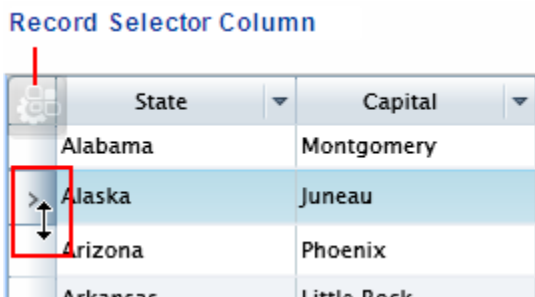
To select a contiguous range of rows, select the first row, hold down the **SHIFT** button and select the last row in the range. All rows in between will be selected. For a non-contiguous range of rows, hold down the **CTRL** button and select the rows.

## Resizing Rows

You can resize the rows displayed in the C1DataGrid Web Part by dragging the row divider in the record selector column.

**To resize rows:**

1. Mouse over the divider at the bottom of the row you want to resize in the record selector column. The pointer changes to a vertical double arrow.

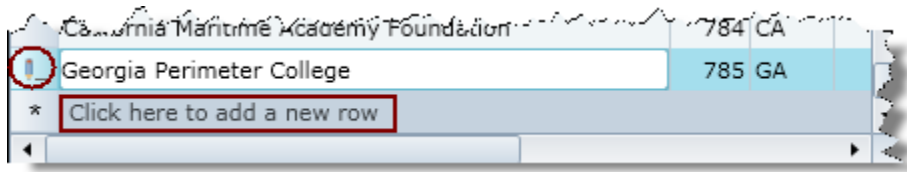


2. Drag the divider up or down, making the row smaller or larger, respectively.

## Editing Cells and Adding Rows

With proper settings, grid cells can be edited. Simply double-click the cell you would like to edit. A pencil icon appears in the record selector column and the cell becomes editable.

You can also add rows to your grid. Click the **Click here to add new row** button at the bottom of the grid to add a new row.



To delete a row, select the row and click the **Delete** key. To delete multiple rows, choose them using Shift+Click or Ctrl+Click first.

This option can be disabled by changing the **Update Mode** in the **DataGrid** and/or **Master-Detail** tabs. Options are: **Automatic**, **Manual**, and **None**. See [Setting the C1DataGrid Data Source](#) on page 64 and [Displaying a Hierarchical Grid](#) on page 65 for details.

## C1DataGrid Tutorial

This tutorial will walk you through the configuration of a C1DataGrid Web Part that will display a master grid showing state capitals and a detail grid showing endowments from selected universities.

You can find the two list templates, **State Capitals** and **Endowments**, that will be used in this tutorial at [http://www.componentone.com/newimages/products/files/sampledata.zip](http://www.componentone.com/newimages/products/files/sampleddata.zip). For more information on adding a list to your SharePoint site's **List Template Gallery**, see [Adding a Template to the List Template Gallery](#) on page 37.

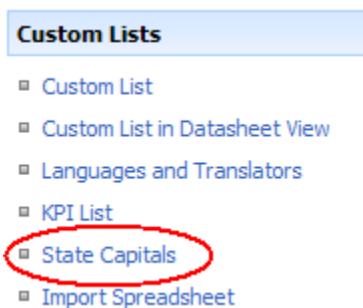
Live interactive tutorials are available on the ComponentOne Studio for SharePoint site. Go to the [ComponentOne SharePoint Demo Site](#) to try out all of the Web Parts on a live SharePoint site. The **User name** and **Password** are: sitevisitor.

**Note:** This tutorial assumes you already have a SharePoint site and have permissions to create lists and edit pages. It also assumes you have installed and are able to view the ComponentOne Web Parts. For additional information, see [Installing ComponentOne SharePoint Web Parts](#) on page 1.

### Step 1 of 4: Create a State Capitals List

We will start by creating a list of state capitals using the **State Capitals** list template.

1. On the Home page of your SharePoint site, click **View All Site Content**.
2. Click the **Create** button at the top of the **All Site Content** page. The **Create** page appears.
3. Click **State Capitals** under the **Custom Lists** column. This list will be used to populate the master grid.



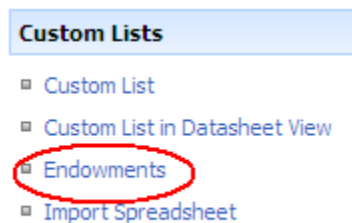
4. Enter **State Capitals** in the **Name** text box and click **Create**. The list appears. Notice the columns: *State*, *ST*, *Capital*, *Longitude*, and *Latitude*.

State	ST	Capital	Longitude	Latitude
Alabama !NEW	AL	Montgomery	-86.300280685	32.37784483
Alaska !NEW	AK	Juneau	-134.419720089	58.301943563
Arizona !NEW	AZ	Phoenix	-112.097002115	33.448056962
Arkansas !NEW	AR	Little Rock	-92.289196616	34.746713899
California !NEW	CA	Sacramento	-121.493173407	38.576637982
Colorado !NEW	CO	Denver	-104.984882536	39.739301178
Connecticut !NEW	CT	Hartford	-72.682265685	41.764047808
Delaware !NEW	DE	Dover	-75.521440668	39.158818255

## Step 2 of 4: Create an Endowments List

Next we will create a quarterly sales list in your site using the **Endowments** list template.

1. On the Home page of your SharePoint site, click **View All Site Content**.
2. Click the **Create** button at the top of the **All Site Content** page. The **Create** page appears.
3. Click **Endowments** under the **Custom Lists** column. This list will be used to populate the detail grid.



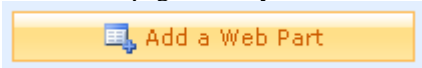
4. Enter **Endowments** in the **Name** text box and click **Create**. The list of universities and their endowments appears. Notice the columns: *Rank*, *Institution*, *State*, *2007 Endowment*, *2006 Endowment*, and *%Change*.

Rank	Institution	State	2007 Endowment	2006 Endowment	% Change
1	Harvard University !NEW	MA	34,634,906	28,915,706	19.8%
2	Yale University !NEW	CT	22,530,200	18,030,600	25%
3	Stanford University !NEW	CA	17,164,836	14,084,676	21.9%
4	Princeton University !NEW	NJ	15,787,200	13,044,900	21%
5	University of Texas System !NEW	TX	15,613,672	13,234,848	18%
6	Massachusetts Institute of Technology !NEW	MA	9,980,410	8,368,066	19.3%
7	Columbia University !NEW	NY	7,149,803	5,937,814	20.4%

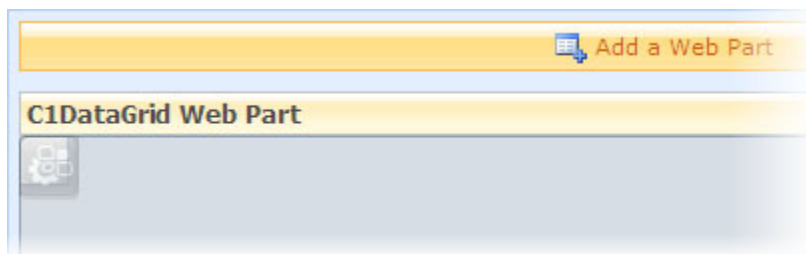
## Step 3 of 4: Adding a C1DataGrid Web Part

Next we are going to create a page with a C1DataGrid Web Part.

1. Click **Site Actions | Create Page** in the upper right corner of your site. The **Create Page** page appears.
2. Enter **C1DataGrid Tutorial** in the **Title** text box.
3. Select **(Welcome Page) Blank Web Part Page** from the list of page layouts and click **Create**. Notice that all areas of the page where you can add a Web Part have an **Add a Web Part** button



4. Click the **Add a Web Part** button under **Top Left**. The **Add Web Parts** dialog box appears.
5. Scroll the items in the dialog box to locate **ComponentOne Web Parts**, and check the checkbox next to **C1DataGrid Web Part**.
6. Click **Add** to close the dialog box. The C1DataGrid Web Part now appears in the top left section of the page.



## Step 4 of 4: Configuring the C1DataGrid Web Part

Now we can configure the Web Part to display a hierarchical grid and use our new list to populate it.

1. Click the C1DataGrid Web Part Properties icon in the top left corner of the Web Part. The C1DataGrid Web Part On-Board Designer opens.
2. Click the **Data Source** tab, click **Sites**, and then select **Home** or the name of your site. You can use the **Sites** menu to select the name of your site or to navigate to other sites within the site collection. Click **More** to type the URL of a different site. Note that if there are multiple sites with the same name, you can hover over the name to see the full URL of the site. When you select a site, all of its lists are shown below the **Sites** menu.
3. Scroll the list and click the arrow next to **State Capitals**. The list is replaced by a grid view where you can specify filter criteria.
4. In the **Output** column, uncheck the following checkboxes: **Capital**, **Longitude**, and **Latitude**.
5. Click the **Master-Detail** tab and select **College Endowments** from **Sites** list.
  - a. Check the **Enable master-detail view** checkbox.
  - b. Click the drop-down arrow under **Master column** and select **ST**.
  - c. Click the drop-down arrow under **Detail column** and select **State**.
  - d. Click the drop-down arrow under **Display related columns** and select **None**.
  - e. Click the drop-down arrow under **Allow grouped columns** and select **All**.
6. Click **Save Web Part**.
7. Click the drop-down arrow next to one of the states in the **State** column. The detail grid displays the state's institutions and endowments. Notice that you can also group columns in both the master and detail grids by dragging a column header to the grouping area.



C1DataGrid Web Part						edit	x
Drag a column here to group by that column							
State				Latitude			
▼	Alabama			32.3778448300578			
▼	Alaska			58.3019435628538			
▲	Arizona			33.448056962118			
Drag a column here to group by that column							
	Institution	Rank	2007 Endowment	2006 Endowment	% Change		
	University of Arizona and Foundation	136	532351	466652	0.14		
	Arizona State University and ASU Foundation	145	478385	394796	0.21		
	Cochise College Foundation	781	3244	0			
▼	Arkansas			34.74671389912			
▼	California			38.5766379822497			

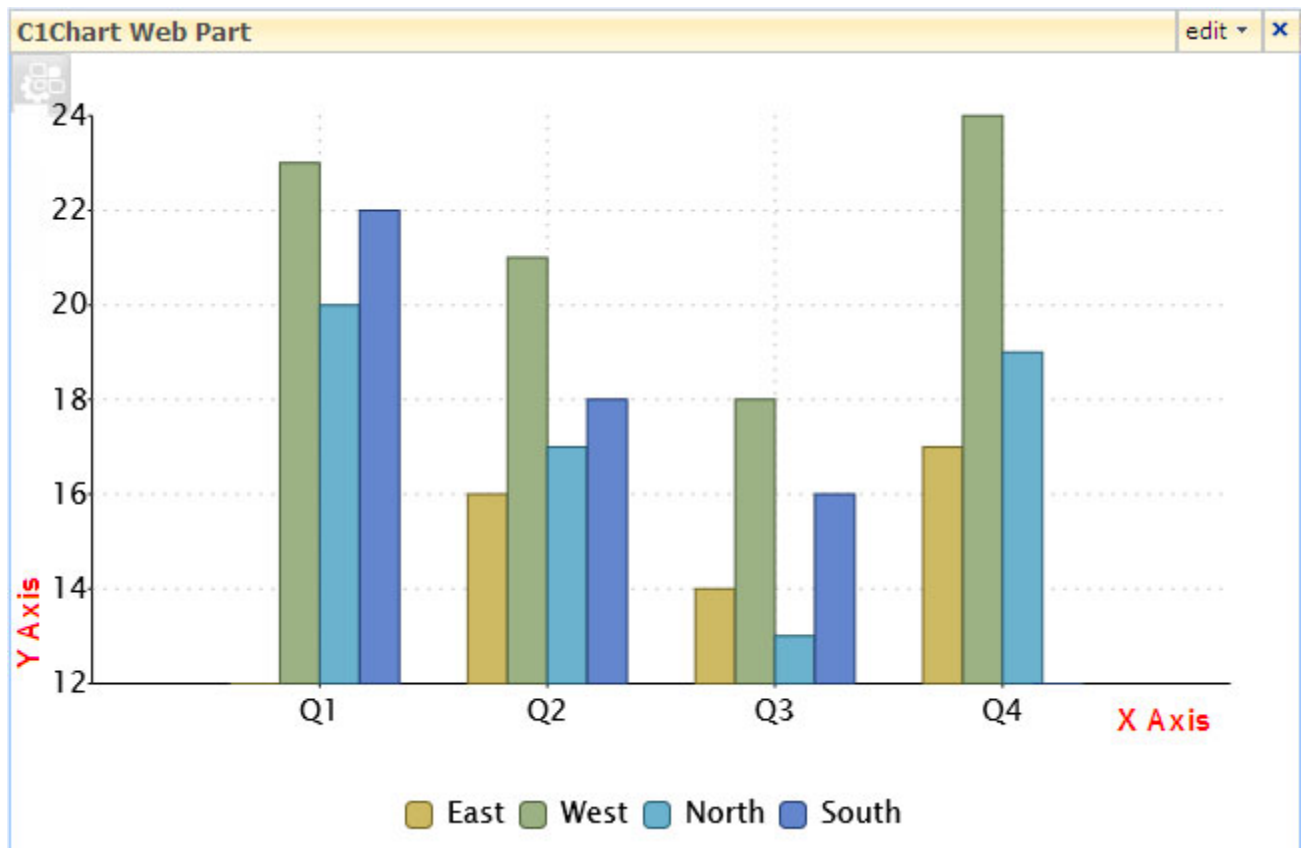
Congratulations, you have successfully completed this tutorial!



# C1Chart Web Part

The C1Chart Web Part provides thirty eye-catching charts to display a series of values retrieved from your SharePoint list, SQL Server® table, Excel® file, or Oracle® database.

The following example shows a simple column chart comparing quarterly sales for four regions:

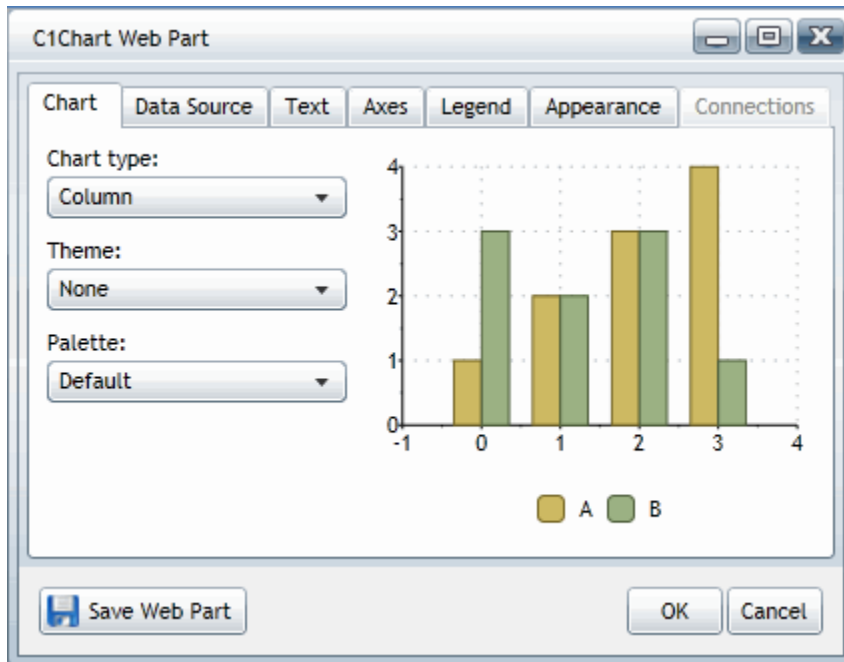


Most charts have two axes, X and Y. The exceptions are pie charts (which have no axes) and charts with a secondary Y axis (Y2, which have three axes). The X and Y axes are labeled in the above example.





## C1Chart Web Part Configuration Properties

The C1Chart Web Part properties allow you to select a SharePoint list or SQL Server table and display its values within a variety of charts. You can also control the appearance and editing control of your Web Part (for more information, see [Setting Properties Using the C1 Web Part Appearance Tab](#) on page 20.)

By clicking the icon in the top left corner of the C1Chart Web Part, you can access the C1Chart Web Part On-Board Designer.



The following table describes the buttons in the designer.

Button	Description
	The <b>Save Web Part</b> button updates the running web part instance and saves the web part's properties to the SharePoint server for future page visits. Clicking this button implicitly performs the OK action before persisting the properties. This button closes the editor.
	The <b>OK</b> button updates the running web part instance but does not save the changes for future page visits. This allows users to test their changes before saving them. This button closes the editor.
 	The <b>Cancel</b> and <b>Close</b> buttons close the editor without updating anything. If the editor is reopened, its controls are reset to the last saved state. These buttons close the editor.

## Creating a Chart

The **Chart** properties allow you to specify the type of chart to display and select a theme and palette to be used for the background and foreground colors of the chart and legend. The following topics explain how to use each of the **Chart** properties.

### C1Chart Types

The C1Chart Web Part provides thirty chart options to display your data. The following table describes the available C1Chart types.

Chart Type	Description
<b>Area</b>	An <b>Area</b> chart displays a series as a set of points connected by a line, with all the area filled in below the line. Area charts are commonly used to represent data that occurs over a continuous period of time.
<b>AreaSmoothed</b>	An <b>AreaSmoothed</b> chart is an area chart where the data points are connected by a smooth line instead of a regular line. This chart is used to display trends rather than values of individual data points.
<b>AreaStacked</b>	An <b>AreaStacked</b> chart shows multiple series stacked vertically. If there is only one series in the chart, the stacked area chart will display the same as an area chart.
<b>AreaStacked100pc</b>	An <b>AreaStacked100pc</b> chart shows an area chart where multiple series are stacked vertically to fit 100% of the chart area. If there is only one series in your chart, the stacked area chart will display the same as an area chart.
<b>Bar</b>	A <b>Bar</b> chart displays series as sets of horizontal bars. The bar chart is the only chart type that displays data horizontally. For this reason, it is popular for representing data that occurs over time, with a finite start and end date. It is also popular for showing categorical information since categories can be displayed horizontally.
<b>BarStacked</b>	A <b>BarStacked</b> chart shows multiple series stacked vertically. If there is only one series in the chart, the stacked bar chart will display the same as a bar chart.
<b>BarStacked100pc</b>	A <b>BarStacked100pc</b> chart shows a column chart where multiple series are stacked vertically to fit 100% of the chart area. If there is only one series in your chart, all bars will fit to 100% of the chart area.
<b>Bubble</b>	A <b>Bubble</b> chart combines two independent values to supply both the point y value and the point sizes. This chart is used to represent an addition data value at each point by changing its size.
<b>Candle</b>	<b>Candle</b> and <b>HiLoOpenClose</b> charts are types of Stock charts used in financial applications to show the opening, closing, high, and low prices of a given stock. A <b>Candle</b> chart is a special type of <b>HiLoOpenClose</b> chart. It represents the change in stock price from opening to closing.

<b>Chart Type</b>	<b>Description</b>
<b>Column</b>	A <b>Column</b> chart displays a series as a set of vertical bars that are grouped by category. Column charts are useful for showing data changes over a period of time or for illustrating comparisons among items.
<b>ColumnStacked</b>	A <b>ColumnStacked</b> chart shows multiple series stacked vertically. If there is only one series in the chart, the stacked column chart will display the same as a column chart.
<b>ColumnStacked100pc</b>	A <b>ColumnStacked100pc</b> chart shows a column chart where multiple series are stacked vertically to fit 100% of the chart area. If there is only one series in your chart, all the column bars will fit to 100% of the chart area.
<b>Gantt</b>	A <b>Gantt</b> chart is used to illustrate a timeline of various tasks and outline the critical activities to a project's completion.
<b>HighLowOpenClose</b>	<b>Candle</b> and <b>HiLoOpenClose</b> charts are types of Stock charts used in financial applications to show the opening, closing, high, and low prices of a given stock. This chart combines four independent values to supply high, low, open and close data for a point in a series.
<b>Line</b>	A <b>Line</b> chart displays a series as a set of points connected by a single line. Line charts are used to represent large amounts of data that occur over a continuous period of time.
<b>LineSmoothed</b>	A <b>LineSmoothed</b> chart is a <b>Line</b> chart that uses a curved line instead of a regular line.
<b>LineStacked</b>	A <b>LineStacked</b> chart shows multiple series stacked vertically. If there is only one series in the chart, the stacked line chart will display the same as a line chart.
<b>LineStacked100pc</b>	A <b>LineStacked100pc</b> chart shows a line chart where multiple series are stacked vertically to fit 100% of the chart area. If there is only one series in your chart, all lines will fit to 100% of the chart area.
<b>LineSymbols</b>	A <b>LineSymbols</b> chart displays a series as a set of points connected by a single line. A filled circle appears at each data point.
<b>LineSymbolsSmoothed</b>	A <b>LineSymbolsSmoothed</b> chart is a <b>LineSymbols</b> chart that uses a curved line instead of a regular line.
<b>LineSymbolsStacked</b>	A <b>LineSymbolsStacked</b> chart shows multiple series stacked vertically. If there is only one series in the chart, the stacked line chart will display the same as a line chart. A filled circle appears at each data point.
<b>LineSymbolsStacked100pc</b>	A <b>LineSymbolsStacked100pc</b> chart shows a <b>LineSymbols</b> chart where multiple series are stacked vertically to fit 100% of the chart area. If there is only one series in your chart, all lines will fit to 100% of the chart area.
<b>Pie</b>	A <b>Pie</b> chart draws each series as a slice in a pie. The number of pies is the number of points in the data.
<b>PieDoughnut</b>	A <b>PieDoughnut</b> is a pie chart that has an open space in the center.

Chart Type	Description
<b>PieExploded</b>	A <b>PieExploded</b> chart is a pie chart where all of the slices are moved away from the center of the pie.
<b>PieExplodedDoughnut</b>	A <b>PieExplodedDoughnut</b> chart is a chart where all of the slices are moved away from the center of the doughnut.
<b>Radar</b>	A <b>Radar</b> chart draws the y value in each data set along a radar line (the x value is ignored except for labels).
<b>RadarFilled</b>	A <b>RadarFilled</b> chart is a <b>Radar</b> chart with the radar lines filled in.
<b>RadarSymbols</b>	A <b>RadarFilled</b> chart is a <b>Radar</b> chart that draws the y value in each data set along a radar line (the x value is ignored except for labels). A filled circle appears at each data point.
<b>XYPlot</b>	XYPlot charts draw each series as connected points of data.

To specify the type of chart to display, complete the following steps:

1. Click the icon in the top left corner of the C1Chart Web Part.
2. On the **Chart** tab, select the desired chart type from the **Chart type** drop-down list.

### **C1Chart Themes**

The C1Chart Web Part incorporates several themes, including Office 2003, Vista, and Office 2007 themes, allowing you to customize the appearance of your grid. The theme defines the color background area of the chart and background of the legend. When the **Palette** is set to **Default**, the theme also defines the color of the chart and legend.

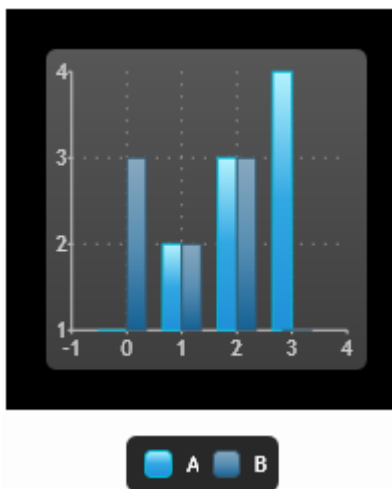
The built-in themes are described and pictured below.

#### **Custom**

Not used in this release.

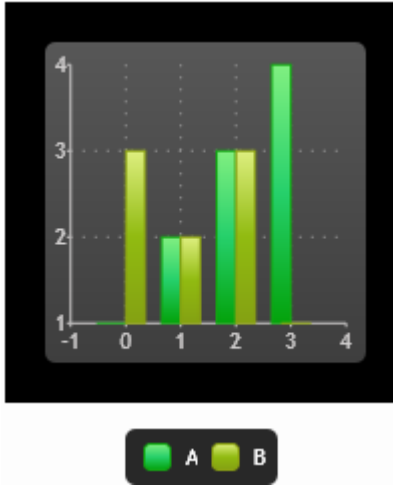
#### **DuskBlue**

This theme appears as a charcoal-colored chart with electric blue and orange highlighting.



### DuskGreen

This theme appears as a charcoal-colored chart with electric green and purple highlighting.



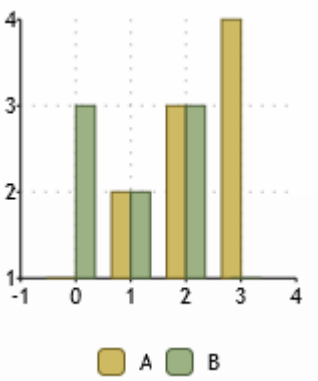
### MediaPlayer

This theme is based on the Windows Media Player style and it appears as a black-colored chart with blue highlighting.



### None

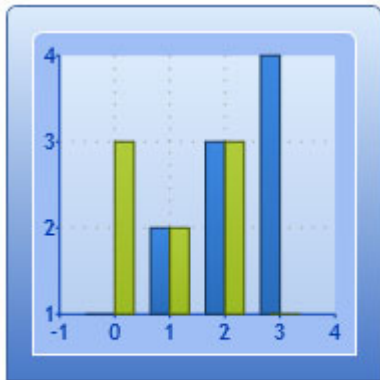
No theme is used.





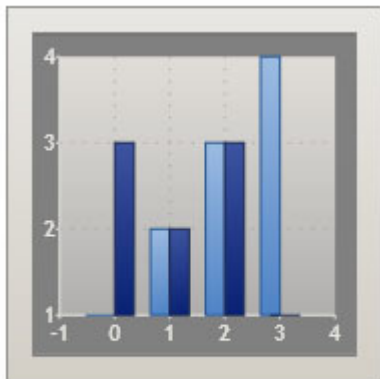
### Office2003Blue

This theme is based on the Office 2003 Blue style and it appears as a neutral-colored chart with blue and orange highlighting.



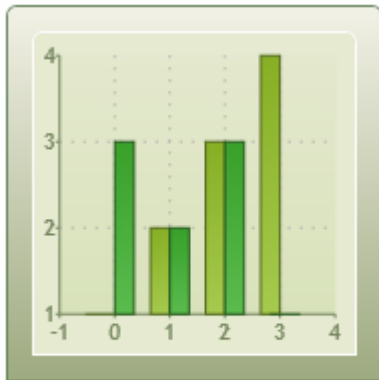
### Office2003Classic

This theme is based on the Office 2003 Classic style and appears as a gray-colored chart with slate-colored highlighting.



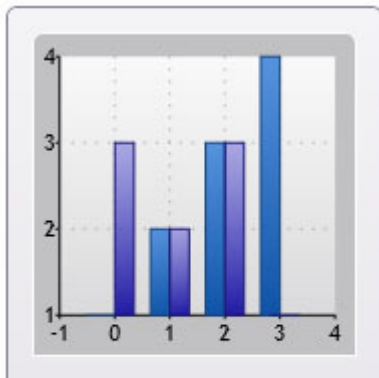
### Office2003Olive

This theme is based on the Office2003 Olive style and it appears as a neutral-colored chart with olive green and orange highlighting.



### Office2003Royale

This theme is similar to the Office 2003 Royale style and appears as a silver-colored chart with blue highlighting.



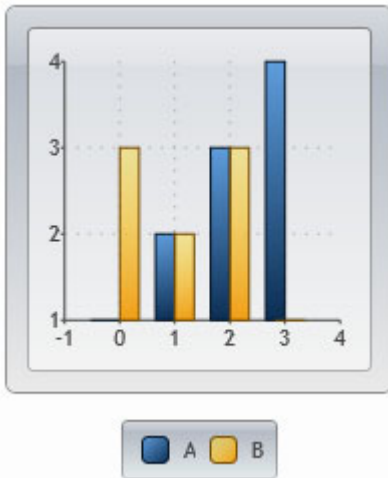
### Office2003Silver

This theme is based on the Office 2003 Silver style and it appears as a silver-colored chart with gray and orange highlighting.



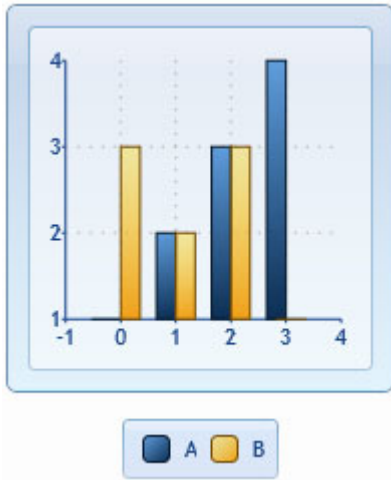
### Office2007Black

This is the theme based on the Office 2007 Black style and it appears as a dark gray-colored chart with orange highlighting.



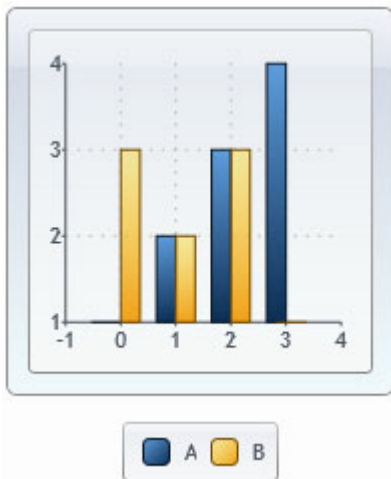
### Office2007Blue

This theme is based on the Office 2007 Blue style and it appears as a blue-colored chart with orange highlighting.



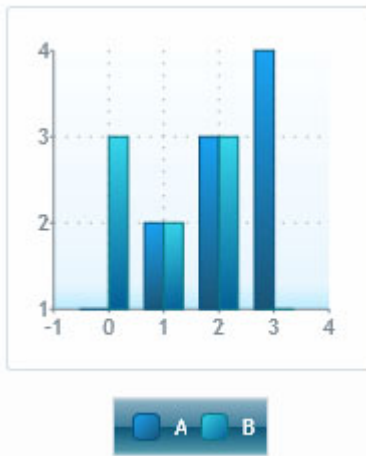
### Office2007Silver

This theme is based on the Office 2007 Silver style and it appears as a silver-colored chart with orange highlighting.



## Vista

This theme is based on the Vista style and it appears as a teal-colored chart with blue highlighting.



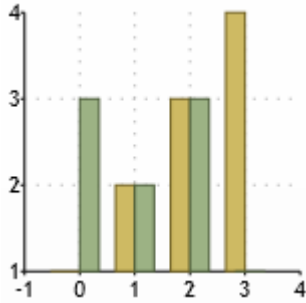
To specify a theme, complete the following steps:

1. Click the icon in the top left corner of the C1Chart Web Part.
2. On the **Chart** tab, select the desired theme from the **Theme** drop-down list.

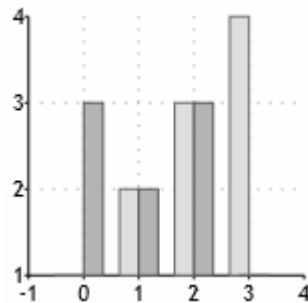
## C1Chart Palette

The Palette is made up of twenty-three options that define the colors of the chart and the legend items. The following table shows the colors for each palette option.

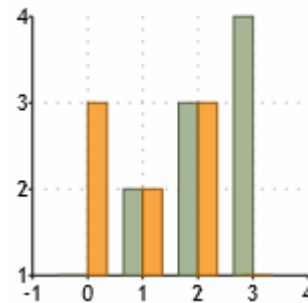
**Apex**



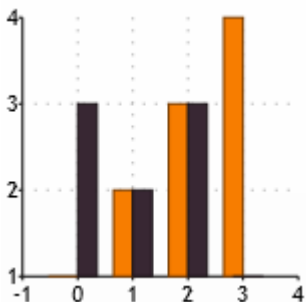
**GrayScale**



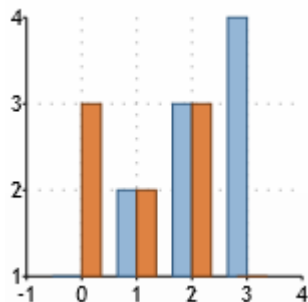
**Paper**



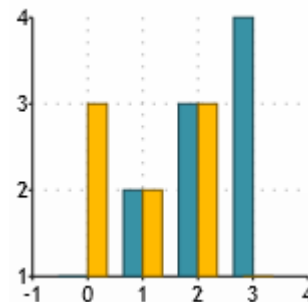
**Aspect**



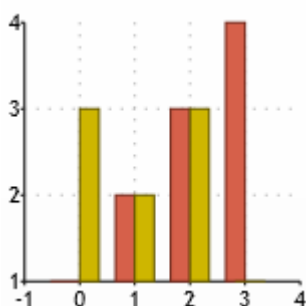
**Median**



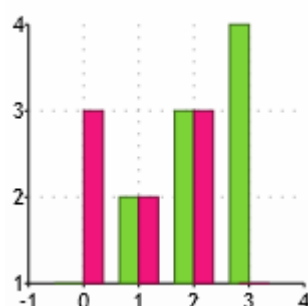
**Solstice**



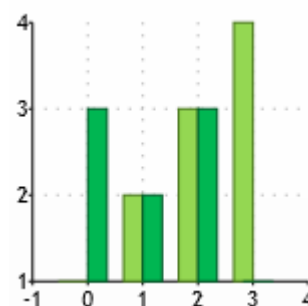
**Civic**



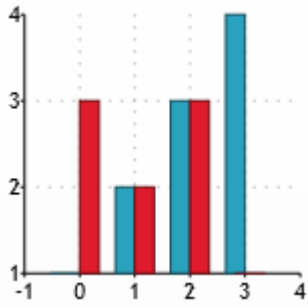
**Metro**



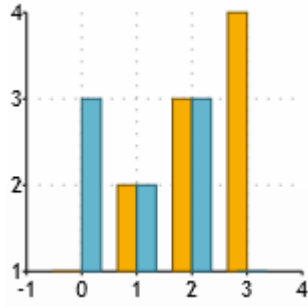
**Standard**



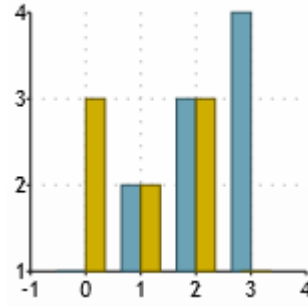
**Concourse**



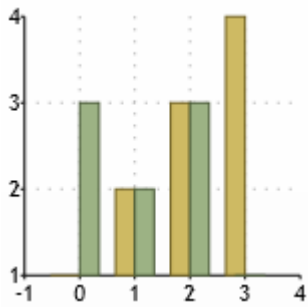
**Module**



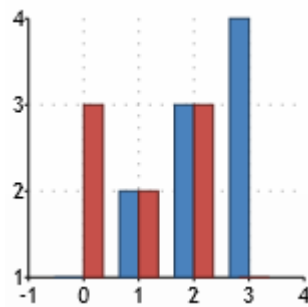
**Technic**



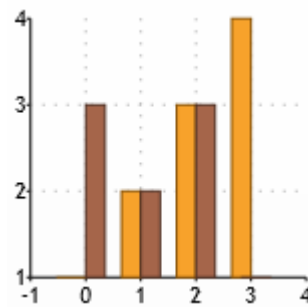
**Default**



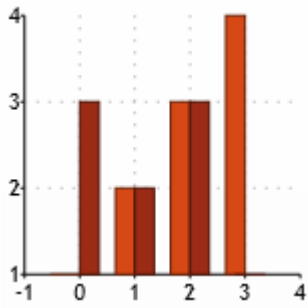
**Office**



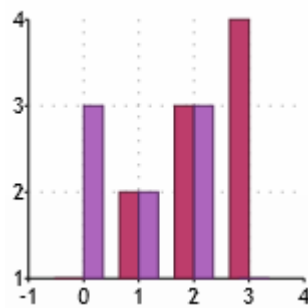
**Trek**



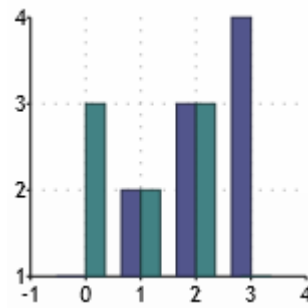
**Equity**



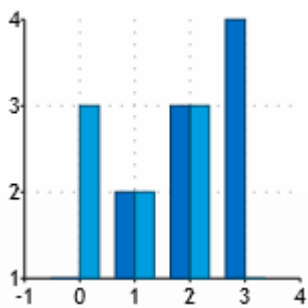
**Opulent**



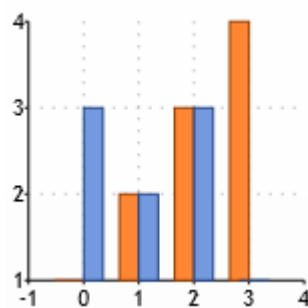
**Urban**



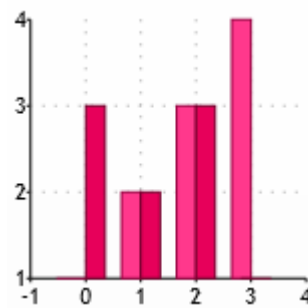
**Flow**



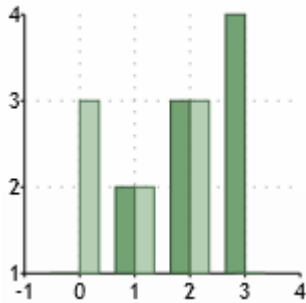
**Oriel**



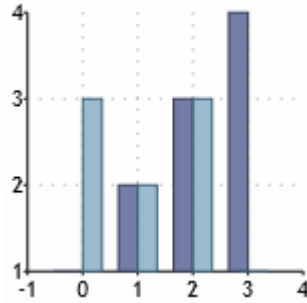
**Verve**



**Foundry**



**Origin**

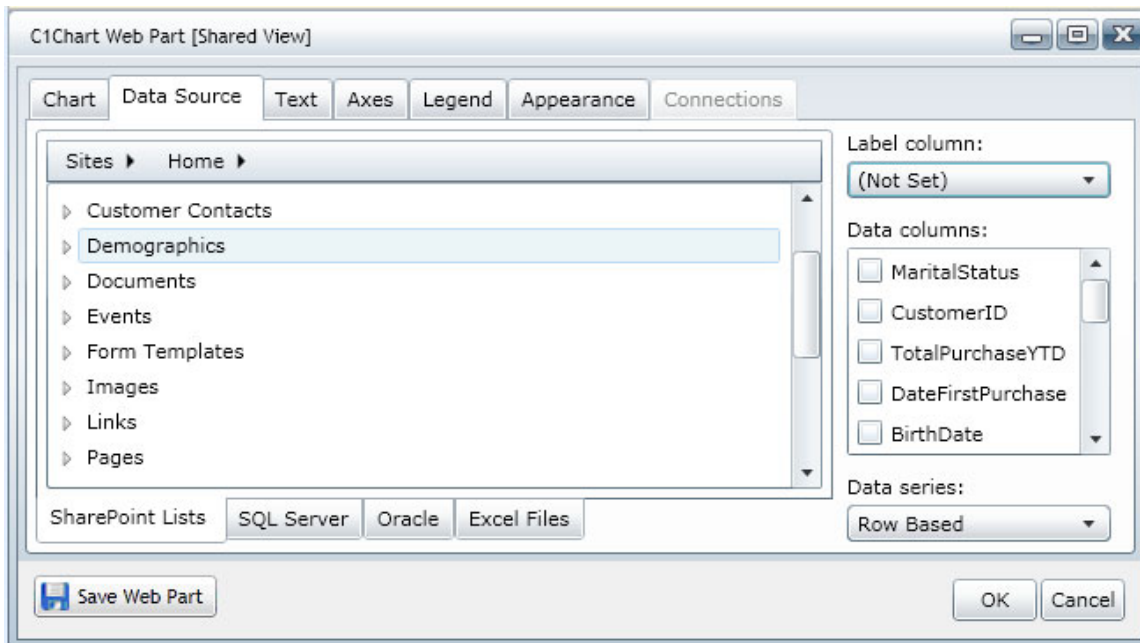


To specify a palette, complete the following steps:

1. Click the icon in the top left corner of the C1Chart Web Part.
2. On the **Chart** tab, select the desired palette from the **Palette** drop-down list.

## Setting the C1Chart Data Source

A SharePoint list, SQL Server table or view, Excel file, or Oracle database can serve as your chart data source. Using the **Data Source** section of the C1Chart Web Part On-Board Designer, you can choose a source list or database.



See the following for information about connecting to a specific data source:

[Using a SharePoint List Data Source](#) on page 23

[Using a SQL Server Table Data Source](#) on page 25

[Using an Excel File Data Source](#) on page 28

[Using an Oracle Data Source](#) on page 30

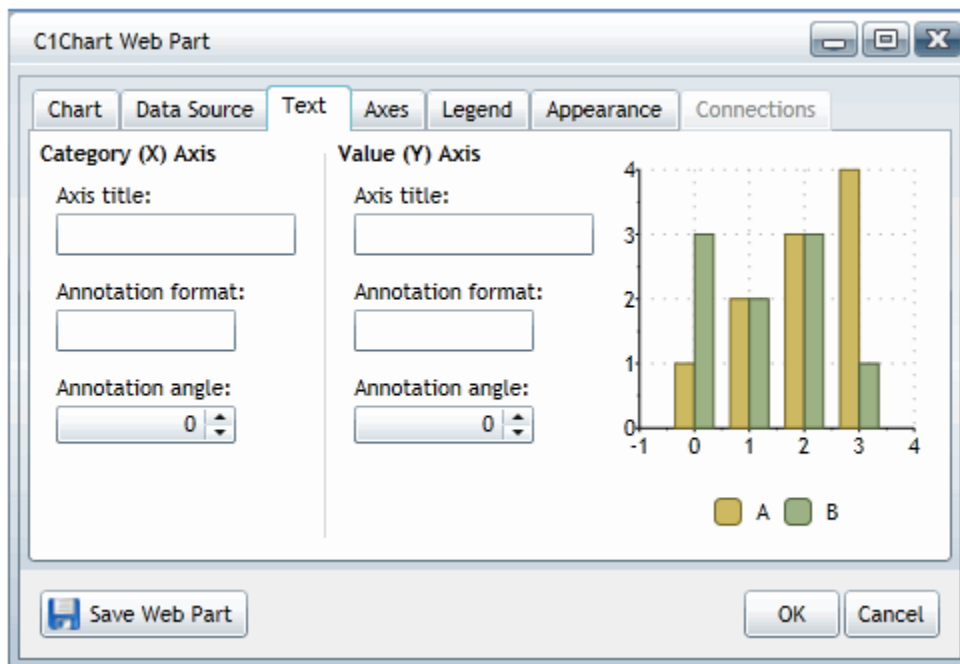


**After the data source is selected:**

1. Click the drop-down arrow under **Label column**. All of the columns in your SharePoint list are listed.
2. Select the column to be used to populate the legend.
3. Click the drop-down arrow under **Data columns** and select one or more numeric columns to be used to populate the Y-axis.
4. Select the data to be Row or Column based under **Data series**.
5. Click **Save Web Part**. The chart is displayed.

## Adding Chart Labels

Using the **Text** properties, you can determine the title for each axis and the format for the axis annotations. Adding a title to an axis clarifies what is charted along that axis.



### Text Properties

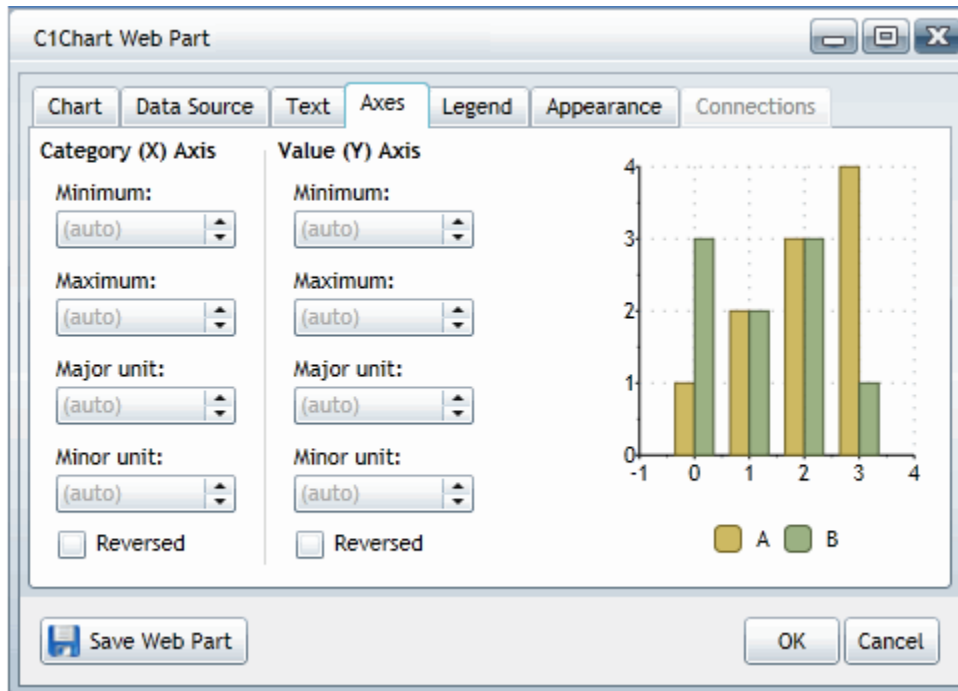
The following properties appear both under Category (X) Axis and Value (Y) Axis.

Property	Description
Axis title	Determines the text used to label the axis. Enter a value in the text box to create a title.
Annotation format	For numeric values, use Microsoft's <a href="#">standard numeric format strings</a> , such as c for currency. For date/time values, use Microsoft's <a href="#">standard date and time format strings</a> , such as t for sort time.
Annotation angle	Determines the angle of which the annotation is slanted. Use the arrows in the list box or enter a new value to change the angle.

**Note:** Tooltips are automatically implemented for data points (columns and symbols).

## Configuring Chart Axes

Using the **Axes** properties, you can determine the beginning and ending values for the X and Y axis as well as the units by which the tick marks will be spaced.



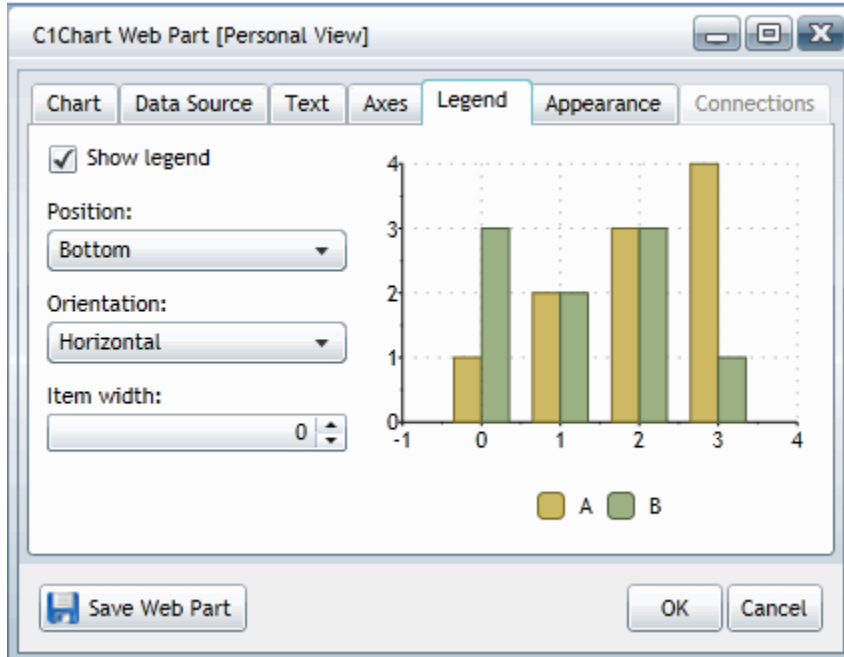
### Axes Properties

The following properties appear both under Category (X) Axis and Value (Y) Axis. To change any of these properties, use the arrows on the list boxes or enter a new value. A sample chart appears to the right so you can view changes before saving them.

Property	Category (X) Axis	Value (Y) Axis
<b>Minimum</b>	Determines the starting, or minimum, value along the X axis.	Determines the starting, or minimum, value along the Y axis.
<b>Maximum</b>	Determines the ending, or maximum, value along the X axis.	Determines the ending, or maximum, value along the Y axis.
<b>Major unit</b>	Determines the spacing between major tick marks along the X axis.	Determines the spacing between major tick marks along the Y axis.
<b>Minor unit</b>	Determines the spacing between minor tick marks along the X axis.	Determines the spacing between minor tick marks along the Y axis.
<b>Reversed</b>	Check the <b>Reversed</b> checkbox to reverse the order of the tick marks and flip the chart horizontally.	Check the <b>Reversed</b> checkbox to reverse the order of the tick marks and flip the chart vertically.

## Customizing the Legend

Using the **Legend** properties, you can show or hide the legend, determine its position, whether it is displayed horizontally or vertically, and how long legend items appear.



### Show legend

The **Show legend** checkbox is checked by default so the legend will be displayed. To hide the legend, uncheck this checkbox.

### Position

To determine the position of the legend, complete the following steps:



1. Click the icon in the top left corner of the C1Chart Web Part.
2. On the **Legend** tab under **Position**, select from one of the following options:

Bottom	Places the legend underneath the chart.
Left	Places the legend to the left of the chart.
Right	Places the legend to the right of the chart.
Top	Places the legend above the chart.

### Orientation

To determine the layout of the legend, complete the following steps:

1. Click the icon in the top left corner of the C1Chart Web Part.
2. On the **Legend** tab under **Orientation**, select from one of the following options:

	<b>Horizontal</b>	Legend items are displayed side-by-side.
	<b>Vertical</b>	Legend items are stacked vertically.

### Item width

If the legend does not fit on a single line, you can set the **Item width** to a non-zero value to simulate a multi-column display. To determine the space between legend items, complete the following steps:

1. Click the icon in the top left corner of the C1Chart Web Part to open the On-Board Designer.
2. On the **Legend** tab under **Item width**, use the arrows or enter a number to determine the space between legend items.

## C1Chart Tutorial

This tutorial will walk you through the configuration of a C1Chart Web Part that will display a chart of quarterly sales units for the East, West, North, and South regions of a company.

You can find the **Quarterly Sales** list template that will be used in this tutorial at <http://www.componentone.com/newimages/products/files/sampleddata.zip>. For more information on adding a list to your SharePoint site's **List Template Gallery**, see [Adding a Template to the List Template Gallery](#) on page 37. This template will be used to create the list of sales numbers we will include in the chart.

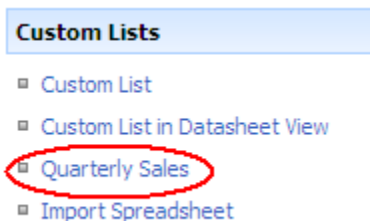
Live interactive tutorials are available on the ComponentOne Studio for SharePoint site. Go to the [ComponentOne SharePoint Demo Site](#) to try out all of the Web Parts on a live SharePoint site. The **User name** and **Password** are: sitevisitor.

**Note:** This tutorial assumes you already have a SharePoint site and have permissions to create lists and edit pages. It also assumes you have installed and are able to view the ComponentOne Web Parts. For additional information, see [Installing ComponentOne SharePoint Web Parts](#) on page 1.

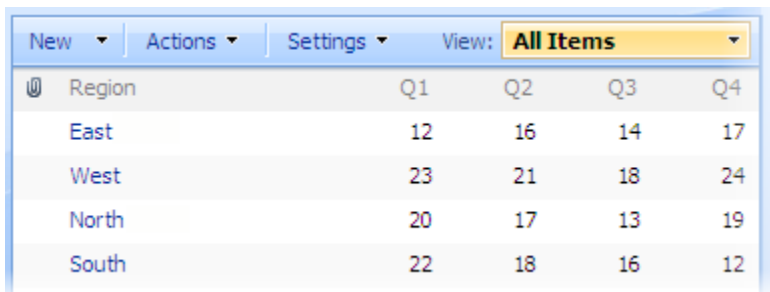
### Step 1 of 3: Create a Quarterly Sales List

We will start by creating a quarterly sales list in your site using the **Quarterly Sales** list template.

1. On the Home page of your SharePoint site, click **View All Site Content**.
2. Click the **Create** button at the top of the **All Site Content** page. The **Create** page appears.
3. Click **Quarterly Sales** under the **Custom Lists** column. This template will be used to create your new page.



4. Enter **Quarterly Sales** in the **Name** text box and click **Create**. The list of regions and their quarterly sales numbers appears. Notice the columns: *Region*, *Q1*, *Q2*, *Q3*, and *Q4*.

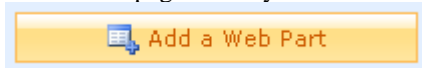


Region	Q1	Q2	Q3	Q4
East	12	16	14	17
West	23	21	18	24
North	20	17	13	19
South	22	18	16	12

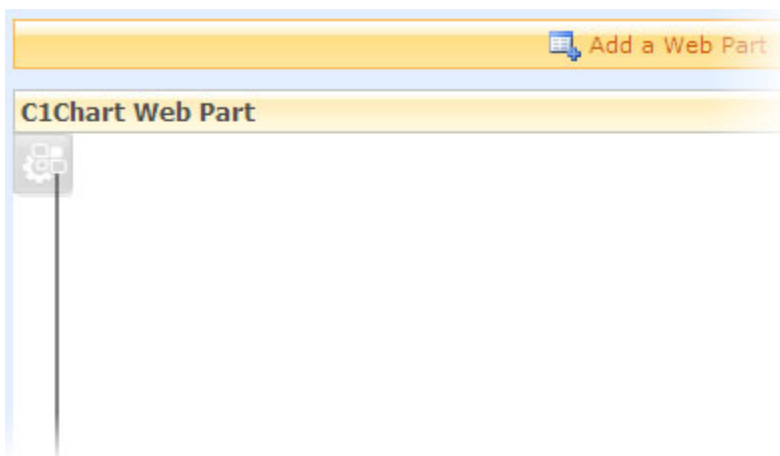
## Step 2 of 3: Adding a C1Chart Web Part

Next we are going to create a page with a C1Chart Web Part.

1. Click **Site Actions** | **Create Page** in the upper right corner of your site. The **Create Page** page appears.
2. Enter **C1Chart Tutorial** in the **Title** text box.
3. Select **(Welcome Page) Blank Web Part Page** from the list of page layouts and click **Create**. Notice that all areas of the page where you can add a Web Part have an **Add a Web Part** button



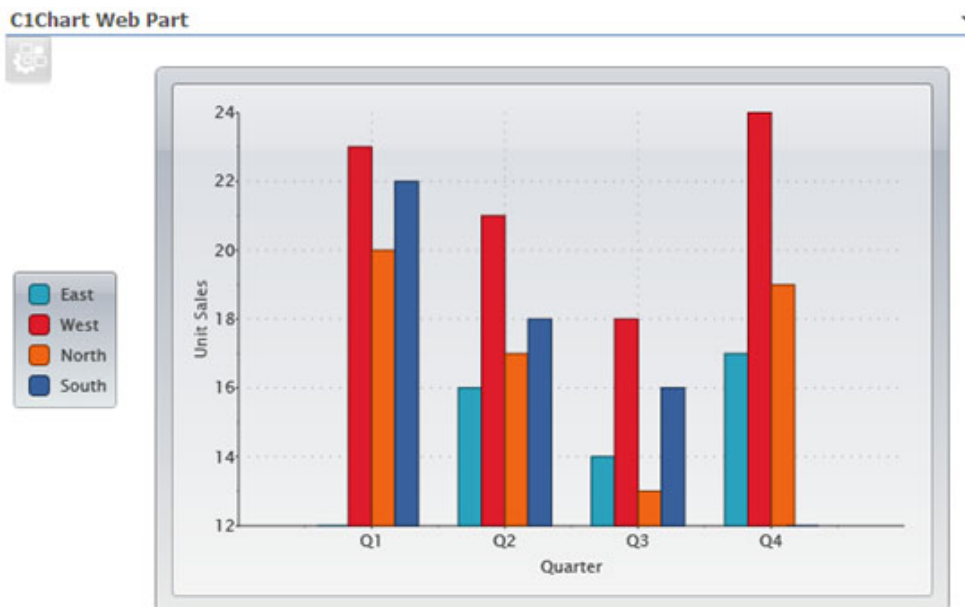
4. Click the **Add a Web Part** button under **Top Left**. The **Add Web Parts** dialog box appears.
5. Scroll the items in the dialog box to locate **ComponentOne Web Parts**, and check the checkbox next to **C1Chart Web Part**.
6. Click **Add** to close the dialog box. The C1Chart Web Part now appears in the top left section of the page.



## Step 3 of 3: Configuring the C1Chart Web Part

Now we can configure the Web Part to display a specific chart and use our new list to populate it.

1. Click the C1Chart Web Part Properties icon in the top left corner of the Web Part. The C1Chart Web Part On-Board Designer opens.
2. Click the **Data Source** tab, click **Sites**, and then select **Home** or the name of your site. You can use the **Sites** menu to select the name of your site or to navigate to other sites within the site collection. Click **More** to type the URL of a different site. Note that if there are multiple sites with the same name, you can hover over the name to see the full URL of the site. When you select a site, all of its lists are shown below the **Sites** menu.
  - a. Scroll the list and select **Quarterly Sales**.
  - b. Click the drop-down arrow under **Label column** and select **Region**.
  - c. Under **Data columns**, select **Q1**, **Q2**, **Q3**, and **Q4**.
  - d. Click the drop-down arrow under **Data series** and select **Row Based**.
3. Click the **Text** tab.
  - a. Under **Category (X) Axis**, enter **Quarter** for the **Axis title**.
  - b. Under **Value (Y) Axis**, enter **Unit Sales** for the **Axis title**.
4. Click the **Legend** tab.
  - a. Click the drop-down arrow under **Position** and select **Left**.
  - b. Click the drop-down arrow under **Orientation** and select **Vertical**.
5. Click the **Chart** tab.
  - a. Click the drop-down arrow under **Theme** and select **Office2007Black**.
  - b. Click the drop-down arrow under **Palette** and select **Concourse**.
6. Click **Save Web Part**. The C1Chart Web Part displays a column chart showing the unit sales over four quarters for the East, West, North, and South regions.



Congratulations, you have successfully completed this tutorial!

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