

HP Storage Essentials Storage Resource Management Report Optimizer Software 6.0 Performing On-Report Analysis with Web Intelligence

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About Web Intelligence

How Web Intelligence performs business intelligence over the web

Web Intelligence provides business users an easy to use interactive and flexible user interface for building and analyzing reports on corporate data over the web, on secured intranets and extranets. The Web Intelligence software is installed by your administrator on a web server on your corporate network.

To use Web Intelligence from you local computer, you log into the business intelligence portal InfoView via your Internet browser. Then, depending on your security profile, you can interact with the reports in corporate documents or edit or build your own documents using a Web Intelligence report panel or query panel.

Interacting with Web Intelligence reports

Depending on your security profile and on how Web Intelligence is deployed across your organization, you can view, analyze, or enhance and modify the data displayed in reports.

Viewing and printing reports

Once logged into the business intelligence portal InfoView, you can access Web Intelligence documents and view reports. Onscreen navigation is made easy with page-to-page navigation buttons and a document map that allows you to jump from section to section or report to report.

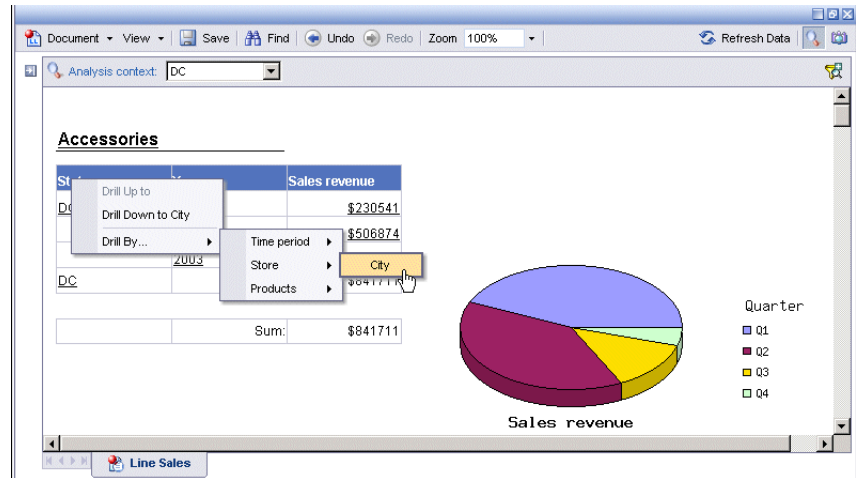
The same document can provide the information adapted to each user due to prompts that request each user, who opens the document, to specify the data they want to return to the reports.

When you print reports, Web Intelligence automatically generates a copy of reports in Portable Document Format (PDF) format for optimum print quality.

Drilling results

Drilling on Web Intelligence reports in **HTML** or in **Interactive** format enables you to analyze the detailed data behind the displayed results. You can turn the report you are

viewing into a drillable report or drill on a duplicate of the original report to retain a version of the results before your drill analysis.



Once you have found the information you need, you can save a snapshot of the drilled report to share the results of your analysis with other Web Intelligence users, or save the document in Excel or Portable Document (PDF) format to print or email to other business contacts.

Performing on-report analysis

Viewing Web Intelligence reports in **Interactive** view format enables you to enhance reports and fine-tune the data reports contain, to highlight the information that most interests you on demand.

On-Report Analysis is designed for:

- users who need to build queries and then want to build reports
- report consumers who need to manipulate the reports created by others

With On-Report Analysis you can:

- view document metadata to understand the data behind reports and see how reports are structured and filtered
- filter and sort results
- add new tables and charts
- add formulas and create variables
- format and change the layout of charts and tables
- slice and dice results by adding other data to charts and tables

Full information on how to use On-Report Analysis can be found in this guide.

Note: On-report analysis of Web Intelligence reports in **Interactive** view format is only available, if your administrator has deployed Web Intelligence in JSP mode.

Creating and editing Web Intelligence documents

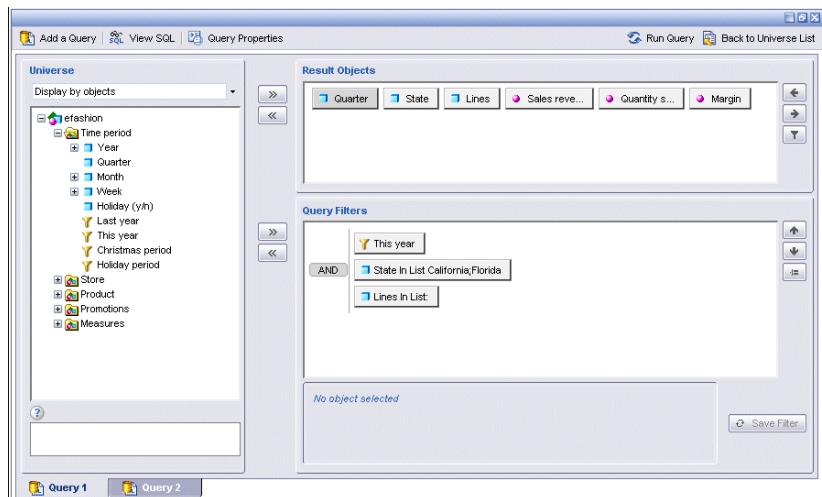
You can create or edit Web Intelligence documents using one of several tools:

- Query – HTML
- Java Report Panel
- HTML Report Panel

This section explains the differences between each tool.

Web Intelligence Query – HTML

Designed for users requiring a pure HTML environment to build queries, Web Intelligence Query – HTML offers the ability to define the data content of documents on multiple data sources. You can use Query – HTML to create new documents from scratch or edit the queries in documents created using any of the other Web Intelligence tools.



Used together with On-Report Analysis, Query – HTML provides a complete solution for building queries and designing powerful reports in a pure HTML environment. Once you have run the queries to generate a standard report, you can leverage Web Intelligence On-Report Analysis features to format multiple reports, add formulas, and create variables.

Note: Web Intelligence Query – HTML and On-Report Analysis in **Interactive** view format are only available, if your administrator has deployed Web Intelligence in JSP mode.

Web Intelligence Java Report Panel

The Java Report Panel is designed for users who need more flexibility with designing report layout and defining formulas and variables. A graphical Formula Editor enables you to build formulas rapidly using drag-and-drop.

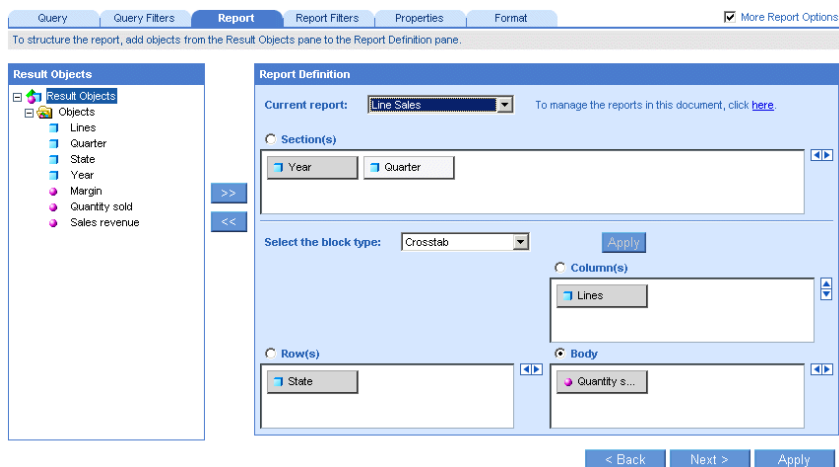
The screenshot displays the Web Intelligence Java Report Panel interface. The top menu includes 'Edit Query' and 'Edit Report'. The main area shows a report design area with a 'Quantity sold' variable. Below this are three panels: 'Available Objects' (listing State, Year, Quantity sold, Sales revenue, Variables), 'Available Functions' (listing All, Abs, Average, Ceil, Count), and 'Available Operators'. A description for the 'Abs' function is shown: 'number Abs (number input_number) Returns the absolute value of a number.' Below the design area is a bar chart showing 'Quantity sold' for 'Dresses', 'Jackets', 'Overcoats', 'Sweaters', and 'Trousers' across three states: California, Colorado, and Florida. To the right of the chart is a data table with columns for 'Lines', 'Sales revenue', and 'Sales revenue'.

Lines	Sales revenue	Sales revenue	Sales revenue
Dresses	\$235059	\$71389	\$88236
Jackets	\$82617	\$15254	\$15256
Overcoats	\$13620	\$6054	\$3624
Sweaters	\$290029	\$82788	\$88526
Trousers	\$53509	\$11420	\$8703
Max:	\$290029	\$82788	\$88526
Average:	\$130967	\$37381	\$40889

Note: The Web Intelligence Java Report Panel is available if your administrator has deployed Web Intelligence in ASP mode and if your administrator has deployed Web Intelligence in JSP mode.

Web Intelligence HTML Report Panel

Designed for users who need to build basic reports, the HTML Report Panel provides query and report features in a simple wizard-like interface. Each document is based on a single data source and can contain multiple reports, displaying different subsets of information.



In addition, the HTML Report Panel is 508 compliant and can be customized for specialized deployments.

Note: The Web Intelligence HTML Report Panel is only available, if your administrator has deployed Web Intelligence in JSP mode.

This guide tells you how to build and format Web Intelligence reports using On-Report Analysis. For information on building queries using Web Intelligence Query – HTML, see *Building Queries Using Web Intelligence Query – HTML*. For information on using the Web Intelligence Java Report Panel, see *Building Reports Using the Web Intelligence Java Report Panel*. For information on using the Web Intelligence HTML Report Panel, see *Building Reports Using the Web Intelligence HTML Report Panel*.

Accessing Web Intelligence via InfoView

Overview

You access Web Intelligence reports via InfoView, the corporate business intelligence portal.

This chapter tells you how to:

- [log into InfoView](#)
- [log out of InfoView](#)

Logging into InfoView

You access Web Intelligence by using your web browser to log into InfoView, the corporate business intelligence portal. Once you are in InfoView, you can analyze and enhance Web Intelligence reports.

Before you can use InfoView and Web Intelligence you need the following information:

- a URL to the InfoView server
- the InfoView server name and port number
- your login and password
- your authentication, which controls the InfoView resources available to you

Note: Contact your administrator for this information, if necessary.

To log into InfoView

1. Launch your web browser.
2. Point your browser to the InfoView bookmark or URL.
The InfoView login page appears.
3. If the **System** box is blank, type the name of the InfoView server followed by a colon (:), and then type the port number.
For example, if the name of the InfoView server is corpbusintell and the port number is 4200, then type: corpbusintell:4200
Your administrator can provide you with this system information.
4. In the **Username** box, type your user name.
5. In the **Password** box, type your password.
6. In the **Authentication** box, select the authentication provided to you by your administrator.

7. Click **Log On**.

The InfoView home page appears.

Logging out of InfoView

When you finish using InfoView or Web Intelligence you need to log out, instead of simply closing your web browser.

Logging out of InfoView:

- ensures that any preferences you modified during your InfoView session are saved
- lets your administrator track how many users are logged into the system at any given time and thus optimize InfoView and Web Intelligence performance

Note: Before logging out of InfoView, save any documents you have open. For information on saving documents, see "[Saving Web Intelligence documents to InfoView](#)" on page 248.

To log out of InfoView



1. Click the **Logout** button.

The login page appears. You are logged out of InfoView.

Setting your Web Intelligence options

Overview

Before you start to use Web Intelligence, you need to set your Web Intelligence Document Preferences appropriately to suit your query and reporting needs. This chapter explains:

- how to set your view format options to enable on-report formatting, calculations, filters, and analysis on the fly
- how drill options to perform slice-and-dice analysis on results
- how to set your workspace preferences and reporting rules

Selecting Web Intelligence view formats

You can select different view formats for Web Intelligence documents depending on how you want to interact with the information displayed on the reports. You select your Web Intelligence view options in InfoView. When you modify your view options, the new settings are implemented the next time you open a Web Intelligence document.

To select a format to view documents



1. Click the **Preferences** button on the InfoView toolbar.
2. Click the **Web Intelligence Document Preferences** tab.
The **Web Intelligence Document Preferences** page appears.
3. In the **Select a view format** section, select the view format you want.
Use the following table to help you select the appropriate format:

If you want to...	then select...
Open reports, answer prompts, navigate reports, and/or perform drill analysis,	HTML

If you want to...	then select...
<p>Modify formatting and data displayed on tables and charts, define filters, sorts, formulas, and variables, and/or perform drill analysis,</p> <p>If you also want to modify the data definition of a document by editing the queries, it is recommended you select Query – HTML as your report panel. Using Query – HTML and Interactive view format provides you with a complete solution for building queries and designing reports in a pure HTML environment. For more information, see <i>Building Queries Using Web Intelligence Query – HTML</i>.</p>	<p>Interactive</p>
<p>View static reports,</p>	<p>Portable Document Format</p>

NOTE: **Interactive** view format is only available if your administrator has deployed Web Intelligence in JSP mode.

NOTE: To open files in Portable Document Format (PDF), you need Adobe Acrobat Reader installed on your computer. You can download Acrobat Reader free from the Adobe web site (visit www.adobe.com).

1. Click **OK**.

Any documents you already have open are not affected by the new settings. The new settings are activated the next time you open a Web Intelligence document.

Selecting your Drill options

Drilling on reports lets you look deeper into data to discover the details behind a good or bad summary result displayed on a table, chart, or section. Before you begin a drill session, you can set your drill options in InfoView to specify how reports will change each time you drill. This section tells you:

- what drill options are available to you

- how to select the drill options appropriate for your analysis

Available drill options

This section describes the various options available to you when you perform drill analysis on Web Intelligence reports.

Start drill on the existing report or on a duplicate report

When you drill on a report, you can:

- **Start drill on the existing report** – the current report becomes drillable and when you end drill mode, the report displays the drilled values.
Or
- **Start drill on a duplicate report** – InfoView creates a duplicate of the current report and you drill on the duplicate. This means you can compare the results of the original report with the results you discover during your drill analysis.

Being prompted if a drill action requires additional data

When you drill the results displayed on a Web Intelligence report, you may want to drill to higher- or lower-level information that isn't included in the scope of analysis for the document. When this is the case, Web Intelligence needs to run a new query to retrieve the additional data from the data source.

Since queries on large selections of data may take a long time to be completed, you can choose to be prompted with a message every time a new query is necessary. The prompt message asks you whether you want to run the additional query or not. In addition, the prompt lets you apply filters to the extra dimensions you include in the new query. This means you can restrict the size of the query to only the data necessary for your analysis.

Note: You need permission from your administrator to drill out of the scope of analysis during a drill session.

Synchronizing drill on all tables and charts in the report

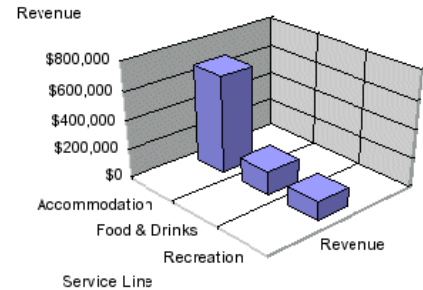
Each table, chart, or free standing cell in a report represents a specific *block* of data. There are two ways to drill on a report that contains multiple blocks:

- synchronize drill on all report blocks
- drill on *only* the selected block

The following example shows how each option affects a report as you drill down on the Bahamas Beach resort in a table to analyze detailed results per service line.

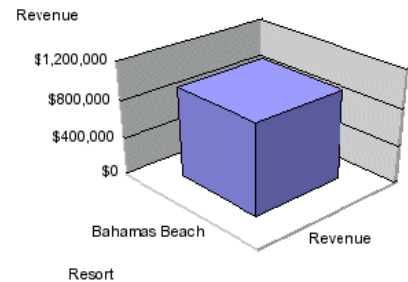
In this example, **Synchronize drill on report blocks** is selected in your view options, so both the table and the chart display the drilled

Service Line	Revenue
Accommodation	\$673,664.00
Food & Drinks	\$169,680.00
Recreation	\$128,100.00



In this example, **Synchronize drill on report blocks** is

Service Line	Revenue
Accommodation	\$673,664.00
Food & Drinks	\$169,680.00
Recreation	\$128,100.00



Showing or hiding the Drill toolbar

When you drill on a value displayed on a report, the **drill toolbar** appears and displays the value on which you drilled. The value displayed on the toolbar filters the results displayed on the drilled report.

For example, if you drill on year 2001, the results displayed on the drilled table are Q1, Q2, Q3, and Q4 for year 2001. This means that the quarterly values you drilled to are *filtered* by 2001.

Quarter	Dresses	Sales revenue
Q1	Dresses	\$136431
Q2	Dresses	\$47633
Q3	Dresses	\$76501
Q4	Dresses	\$289066

The **drill toolbar** displays the value that filters the drilled results

Note: If the drilled report includes dimensions from multiple queries, a ToolTip appears when you rest your cursor on the value displayed on the filter. The ToolTip displays the name of the query and the dimension for the value.

The Drill toolbar allows you to select alternative values on the same level, in order to filter the results differently. For example, if you use the Drill toolbar illustrated above to select "2002," the results displayed on the drilled table would be Q1, Q2, Q3, and Q4 for year 2002.

You can opt to hide the Drill toolbar when you start drill mode. The Drill toolbar is only useful if you want to select filters during your drill session.

Setting your drill options

You set your drill options in InfoView. When you change your drill options, the changes are implemented the next time you start Drill mode.

To set your drill options



1. On the InfoView toolbar, click **Preferences**.
2. Click the **Web Intelligence Document Preferences** tab.
The **Web Intelligence Document Preferences** page appears.
3. In the **Select a view format** section, select **HTML** or **Interactive**.
For information about the difference between these View formats, see "[To select a format to view documents](#)" on page 23.
4. In the **For each new drill session** section, choose whether to drill on the existing report or on a duplicate report:

If you want Web Intelligence to...	then select...
retain a copy of the original report, so that you can compare the drilled results to the results on the original report,	Start drill on a duplicate report
drill on the existing report, so that the original report becomes modified by your drill actions,	Start drill on the existing report

1. In the **General drill options** section, select the options to apply during your drill sessions:

If you want Web Intelligence to...	then select...
prompt you whenever a drill action requires a new query, so that Web Intelligence can extend the scope of analysis and add more data to reports,	Prompt if drill requires additional data For more information, see "Being prompted if a drill action requires additional data" on page 25.
synchronize drilling on all report blocks,	Synchronize drill on report blocks For more information, see "Synchronizing drill on all tables and charts in the report" on page 25.
hide the drill toolbar when you switch to drill mode,	Hide drill toolbar For more information see "Showing or hiding the Drill toolbar" on page 26.

1. To apply the new drill settings, click **OK**.
The modifications are implemented the next time you open a Web Intelligence document and start Drill mode.

Note: There is an additional drill option, *Use query drill*, that you set at the document level rather than in InfoView. *Query drill* is a special drill mode designed for drilling on aggregates in databases like Oracle 9i OLAP. For more information, see ["Using query drill"](#) on page 55.

Setting your personal preferences

You can choose personal preferences for how you want Web Intelligence to appear on your desktop and how you want some of the reporting options to be applied every time you use them.

- **My Workspace** preferences – define how the Web Intelligence, toolbars, and menus appear on your desktop
- **Reporting Rules** – define how Web Intelligence applies reporting options (such as breaks, sorts, and drill), when you use them on reports

Note: If your security profile enables you to define the data included documents, by building queries, the ability to define your query rules is also available. For information about defining your query rules, see *Building Queries Using Web Intelligence Query-HTML*.

Note: To set these preferences you need to have a Web Intelligence document open.

To set the display properties of your Web Intelligence workspace

1. With a Web Intelligence document open, click the arrow next to **View** on the main toolbar above the selected report.
For step-by-step information on how to open Web Intelligence documents, see ["To open a document and view results in reports"](#) on page 33.
2. Click **Preferences**.
The **Preferences** dialog box appears.
3. Make sure the **My Workspace** tab is selected.
4. Use the following table to help you select the appropriate options:

Adjust the measurement unit used to position the different elements on reports,	<ul style="list-style-type: none">• Select the arrow next to Measurement unit• Select Inches or Centimeters
When you use the contextual menu, display the name of the part of the report you have selected at the top of the menu,	<ul style="list-style-type: none">• Select Display the name of the selected report element on contextual menus
Make the contextual menu available, when you place your pointer on areas of reports,	<ul style="list-style-type: none">• Select Activate contextual menus using mouseover
Make the contextual menu available, when you right-click areas of reports,	<ul style="list-style-type: none">• Select Activate contextual menus using right-click
Deactivate the contextual menu, and only use the toolbar buttons and menus to interact with reports,	<ul style="list-style-type: none">• Select Do not activate contextual menus

1. Click **OK**.

Web Intelligence applies the preferences you selected the next time you open a Web Intelligence document.

To define your reporting rules

1. Click the arrow next to **View** on the main toolbar above the selected report.
2. Click **Preferences**.
The **Preferences** dialog box appears.
3. Make sure the **Reporting Rules** tab is selected.
4. Select the appropriate options.

The following table provides information on the options:

apply the formatting options you select for reports automatically, as soon as you select each option,	<ul style="list-style-type: none"> • Check Apply format modifications automatically
display column and row headers on tables without breaks, NOTE: For more information, see "Inserting, removing, and prioritizing breaks" on page 172.	<ul style="list-style-type: none"> • Check Add table header when the last break is removed from a table
to apply the last sort you add on a table first,	<ul style="list-style-type: none"> • Select The last sort added always takes precedence
to apply the last sort you add on a table last,	<ul style="list-style-type: none"> • Select The last sort added is applied after any other sorts
during a drill session, highlight cells you drill with the format specified by default	<ul style="list-style-type: none"> • Select Apply the default format settings to drillable cells when selected

<p>during a drill session, highlight cells you select for drill with the color and font format you specify,</p>	<ul style="list-style-type: none"> • Select Apply custom highlighting to drillable cells when selected, as defined here: <ul style="list-style-type: none"> • To format selected cells with underlined text, click Underlined • To format selected cell backgrounds with a color, click the arrow next to Background color, then select a color • To format selected cell contents with a color, click the arrow next to Text color, then select a color

1. Click **OK**.

Web Intelligence applies the preferences you selected the next time you open a Web Intelligence document.

Setting the format locale

The format locale determines the language-specific appearance and behavior of Web Intelligence documents. The format locale affects, for example, date formats, number formats and the order of sorts.

By default, the document locale is the same as the user interface locale. For example, if the user interface is in English, the document formatting follows English rules.

You can save a document with a format locale that is different from the user interface locale. To do so, select a locale from the **Select a format locale** list. If, on next opening the document, you choose to maintain the format locale (see [“Choosing the format locale on opening a document”](#) on page 32), the document behaves according to the format locale you specified. For example, if you specified French (France) as the format locale and you open the document through an English user interface, the document is formatted and behaves according to French formatting rules. You enter decimal numbers according to the English format (3.51) but they appear in the document in the French format (3,51).

Viewing the format locale

You view the document format locale either through the document properties or the `GetContentLocale()` function. For information on how to view the document properties, see [“Viewing document properties”](#) on page 79. For information on the `GetContentLocale()` function, see the online help.

Choosing the format locale on opening a document

You can choose whether a document should use the format locale with which it was saved or your current format locale. You do so by setting the **When viewing a document** option. If you choose **Use the document locale to format the data**, Web Intelligence uses the formatting locale with which the document was last saved, and saves the document with this format locale the next time you save it. If you choose **Use my formatting locale to format the data**, Web Intelligence uses your current formatting locale, and saves the document with this locale the next time you save it.

Permanently associating a locale with a document

You can permanently associate a formatting locale with a document by selecting the **Permanent Regional Formatting** option when saving the document. (See ["Saving Web Intelligence documents to InfoView"](#) on page 248.) In this case the **When viewing a document** setting has no effect - the document always behaves according to the format locale with which it was saved.

Summary of locale settings

The following table summarizes format locale settings:

Select a format locale		The document format locale (by default the same as the user interface locale).
When viewing a document... <hr/> Note: This setting is ignored if the document was saved with the Permanent Regional Formatting option checked <hr/>	Use the document locale to format the data	Use the format locale with which the document was last saved to format the data.
	Use my formatting locale to format the data	Use the current format locale to format the data.

Navigating reports

Overview

- This chapter tells you how to access and navigate Web Intelligence reports. It includes information on:
- [accessing Web Intelligence documents, from among documents in InfoView](#)
- [refreshing results in reports, by retrieving the latest data from the database](#)
- [answering prompts, by specifying the values you want to analyze before generating the reports](#)
- [navigating reports, using the quickest path to the information that interests you](#)
- [searching for text in reports, to find specific data](#)
- [viewing the document overview, to understand the data the reports contain and how the document is designed](#)

Accessing documents to view reports

You access documents and reports via InfoView.

Note: Before opening a document, set your Web Intelligence document preferences to the view format and drill options that best suit your reporting needs. See ["To select a format to view documents"](#) on page 23 and ["To set your drill options"](#) on page 27.

To open a document and view results in reports

1. Make sure you are logged into InfoView.
For full information, see ["To log into InfoView"](#) on page 17.
2. On the InfoView home page, navigate to the document you want to open.
You do this by clicking the folders in **My Folders** or **Public Folders**, or by entering a keyword or the title of the document in the **Search** box on the InfoView home page.

The list of documents appears.



3. Click the document title.
4. If the document contains any prompts that need to be refreshed, you need to select or type the value(s) you want returned to the document, and then click **Run Query**.
For more information, see "[Refreshing results to view the latest results](#)" on page 34.
The results appear on the reports.

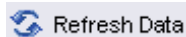
Refreshing results to view the latest results

You refresh a document to update the results displayed in its reports with the latest data available on the database. When you refresh a document, Web Intelligence retrieves the data from the database and returns the up-to-date results to the reports.

Web Intelligence documents can be set to refresh:

- manually – once you have opened a document you can refresh the data yourself to see the latest results
- on open – Web Intelligence refreshes the data automatically each time you open the document

Note: You may need to answer prompts, before Web Intelligence can refresh results. For information on answering prompts, see "[Answering prompts](#)" on page 35.



To refresh reports manually to see the latest results

- With a report in a Web Intelligence document open, click **Refresh Data** on the right of the main toolbar above the report.

Web Intelligence starts to retrieve the latest data from the database. A message appears to tell you how long the data retrieval will take, based on the time it took Web Intelligence to retrieve the results the previous time the document was refreshed.

The updated results appear in the reports.

To set a document to refresh automatically when it is opened

1. With a report in a Web Intelligence document open, click the arrow next to **Document** on the main toolbar.
2. Select **Properties**.

The **Document Properties** dialog box appears.

3. Select **Refresh on open**.
4. Click **OK**.

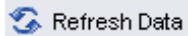
Once you have saved the document, Web Intelligence refreshes the results in reports automatically each time you re-open it.

Answering prompts

Prompts are dynamic filters that display a question or a list of values each time you refresh the data in a Web Intelligence document. You answer the prompt by typing or selecting specific values. Web Intelligence retrieves the data that corresponds to those values and returns the filtered data to the document. Using prompts lets you limit the document data to the specific information that interests you.

For example, you can specify different time periods, product lines, geographies, or customer accounts each time you refresh the document and only display the values for the information you requested. A single document can contain one or multiple prompts.

To enter value(s) for prompts to view specific data in reports



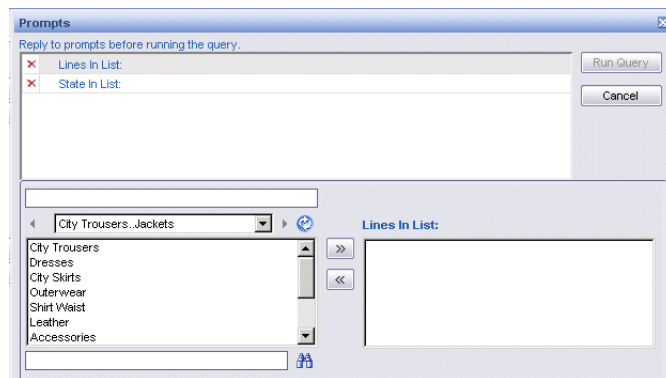
1. With a report in a Web Intelligence document open, click **Refresh Data** on the right of the main toolbar above the report.

The **Prompts** dialog box appears.

2. Select a prompt question.

If the prompts are organized hierarchically in a tree, you need to select the prompt at the lowest level of the hierarchy first. This type of prompt is referred to as a *cascading prompt*. For more information, see "[Cascading prompts](#)" on page 37.

The values you can choose are listed in the pane on the lower left.



If the prompt has been answered previously, the values selected the last time appear in the prompt answer pane on the right. You can either leave those values selected or use the << button to remove them.

The options you see when you answer prompts depend on (1) whether this is the first time the results have been refreshed or not and (2) the properties set for the prompts when they were created.

3. Select the values from the list of choices in the pane on the left, for which you want to view results, or type the values into the text box, and click the >> button to add them to the prompt answer box on the right.

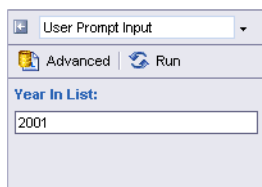
NOTE: If you type multiple values, you need to separate each value with a semi-colon (;). For example: Florida;Texas

4. Click **Run Query**.

Web Intelligence retrieves the data for the values you specified, and returns the results to the reports.

Viewing and answering prompts in the Left Panel

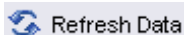
1. Make sure that the Left Panel is displayed by selecting **View > Left panel** on the Main toolbar.
2. Select **User Prompt Input** from the list at the top of the Left Panel.
The list of prompts and their values appears in the Left Panel.



3. Type the new prompt value in the box beneath the prompt name , then click **Run**, or
4. Click **Advanced** to display the **Prompts** dialog box and answer the prompt there as described in ["To enter value\(s\) for prompts to view specific data in reports"](#) on page 35.

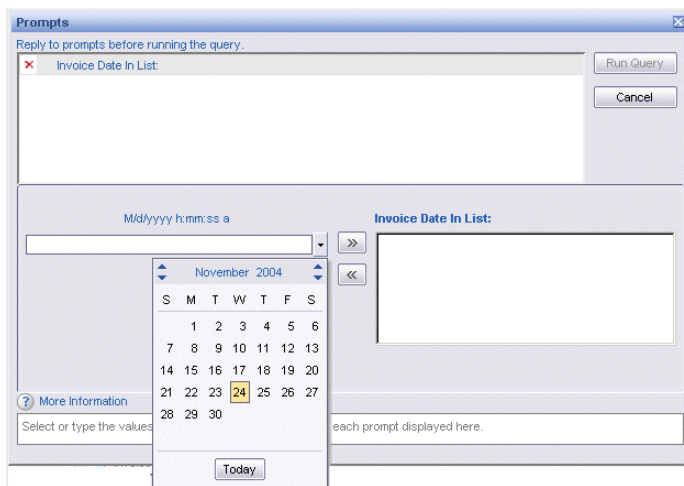
Web Intelligence refreshes the report with the new prompt value(s).

To enter dates to answer a prompt



1. With a report in a Web Intelligence document open, click **Refresh Data** on the right of the main toolbar above the report.
The **Prompts** dialog box appears.
2. To select a date, click the arrow to the right of the text box, select a date from the popup calendar, and then click the >> button to add the date you selected to the list on the right.

If the prompt has been answered previously, the values selected the last time appear in the prompt answer pane on the right. You can either leave those values selected or use the << button to remove them.



3. If the prompt allows you to select multiple dates, and you want to view results for more than one date, repeat step 2.
4. Click **Run Query**.
Web Intelligence retrieves data for the values you specified, and returns the results to the reports.

Cascading prompts

Some prompts are *cascading* prompts. Cascading prompts allow you to focus on the data that interests you without the need to search large amounts of data that does not. For example, if you want to include a particular store in a prompt, you can restrict the number of stores that you need to search by first selected the store city. When you do so, you see only those stores in the city.

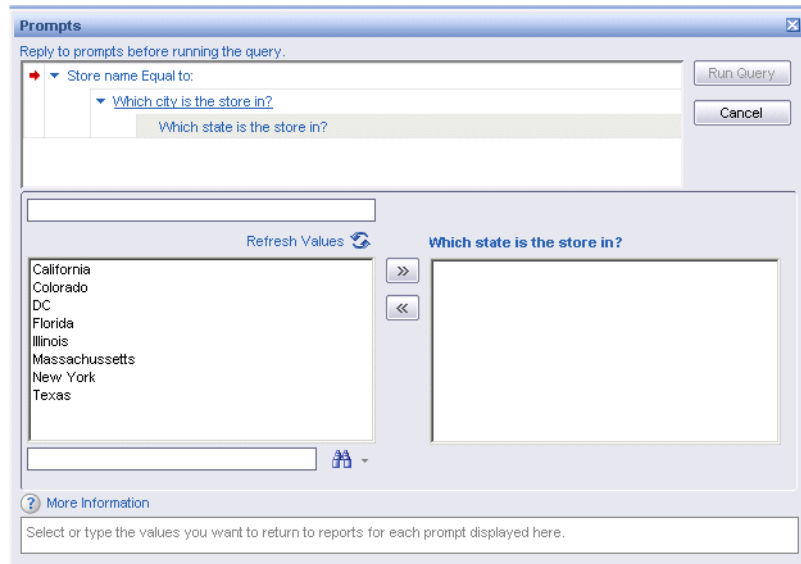
When you refresh a document containing cascading prompts, Web Intelligence displays a hierarchy of prompts that you answer to arrive at the value that you want to include in your report.

Note: The lists of values of objects that trigger cascading prompts are specially defined in the universe to display hierarchically. When a prompt includes such an object, Web Intelligence automatically displays the prompt as a cascading prompt.

Example: Choosing a store

In this example you have a prompt Store Name Equal To <value>. The Store Name object is designed in the universe with a hierarchical list of values. When you refresh the document, Web Intelligence displays a hierarchy of prompts in the **Prompts** dialog box to help you isolate the store you are looking for.

In order to select the store, you must first select the state in which the store city is found, then the city in which the store is found, then the store itself. When you select the state, Web Intelligence restricts the cities in the list of values of the “Which city is the store in?” prompt to the cities in the state; when you select the city, Web Intelligence restricts the stores list of values to the stores in the city.



By answering each prompt in turn you arrive at the store name(s) you are looking for.

Finding your way around reports

There are several ways to navigate reports to focus on the information that most interests you. This section tells you how to:

- optimize how reports display for onscreen viewing
- view reports in page mode or draft mode
- zoom in or out of reports
- navigate directly to specific reports, sections, and pages

Using Enhanced viewing mode for onscreen viewing

Your administrator can define minimum page margins, headers and footers that are applied only when you view reports onscreen. This means that the maximum amount of information on report pages is visible when you view reports via your computer screen. To apply the page definition set up by your administrator you need to select **Enhanced viewing mode**.

Note: The page margins, headers and footers implemented by **Enhanced viewing mode** do not impact the page definition you can apply to reports.

To select Enhanced viewing mode

1. With a report in a Web Intelligence document open, click the arrow next to **Document** on the main toolbar above the report.
2. Click **Properties**.
The **Document Properties** dialog box appears.
3. Select **Enhanced viewing mode**.
4. Click **OK**.
Web Intelligence applies the page definition optimized for onscreen viewing defined by your administrator.

Viewing reports in page mode and draft mode

You can view reports in two viewing modes:

- Page mode – displays the page layout of reports, including page margins, headers, and footers
- Draft mode – displays just the tables, reports, and free standing cells in reports

Use Page mode when you want to fine-tune the formatting of tables and charts and the layout of report pages. Use Draft mode when you want to focus on analyzing results, add calculations or formulas, or add breaks or sorts to tables to organize results.

To switch between viewing modes

1. With a report in a Web Intelligence document open, select the report tab of the report you want to view.
2. Click the arrow next to the **View** button on the main toolbar above the report.
3. Select **Page mode** or **Draft mode**.
Web Intelligence displays the selected report in the selected view mode.

Zooming in on results

You can zoom in or out to enlarge or reduce the size at which reports display.

To use zoom

1. With a report in a Web Intelligence document open, verify that the report tab of the report you want to view is selected.
2. Click the arrow next to the **Zoom** drop-down list box on the main toolbar above the report.
3. Select the display scale percentage at which you want the report to display.
Web Intelligence applies the zoom you specified to the report.

Navigating to results in reports

To find the results you are looking for quickly in documents, you can navigate directly to:

- reports
- sections
- pages

To navigate report-to-report

1. Click the report tab of a report.
Web Intelligence displays the report for the selected tab.

To navigate to a section

1. With a report in a Web Intelligence document open, make sure that the **Document Properties** pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Navigation Map**.
The structure of the document appears with bookmarks to the reports and sections.
3. Click the section you want to view.
The section you selected appears at the top of the report viewing area.

To navigate page-to-page

1. With a report in a Web Intelligence document open, verify you are viewing the document in page mode.
If you need to change from **Draft mode** to **Page mode**, click the arrow next to View on the main toolbar, and then select **Page mode**.
The page forward and page back arrows appear on the main toolbar.
2. Use the arrows or type a page number into the text box.
Web Intelligence displays the page you specified.

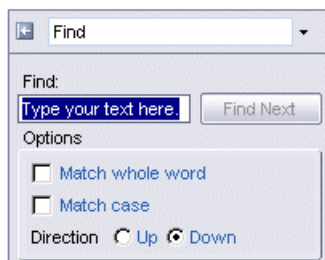
Searching for text in reports

You can use the Search feature to find specific character or numeric strings on report pages quickly. This is useful if you are viewing long reports and want to know the results for a specific item, such as a specific customer or invoice number.

To search for a text string on a report page

1. Make sure that the **Document Properties** pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Find**.

The search options appear.



3. In the text box below **Find:**, type the string of characters and/or numbers you want to find.
4. If you only want to find exact matches to the string you typed, check **Match whole word**.
5. If you want the search to be case sensitive, check **Match case**.
By default, Web Intelligence searches the report page downwards.
Web Intelligence highlights the first occurrence of the string you specified.
6. To search for more occurrences of the same string, click **Find Next**.
7. If you want Web Intelligence to search the report page upwards, click **Up**, then click **Find Next**.

Viewing the document overview

The **Document Properties** pane provides you with information on the queries and data behind the reports. It also shows you how the document is structured into reports and sections, and lists the filters and prompts that fine-tune the results. Lastly, it lists the objects you can add to reports to include more data, and the table and chart types you can use to format the data into meaningful results.

The following table provides information on the different overviews available in the **Document Properties** pane:

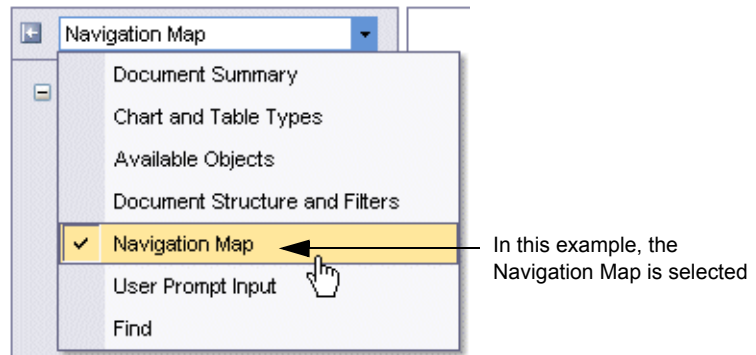
Document Summary	information on:
<p>NOTE: You can print out the Document Summary, see "To print out the Document Summary" on page 43</p>	<ul style="list-style-type: none">• the document author, creation date and the date, when the results were last refreshed with data from the database• each data source or <i>query</i> in the document• each object in each query

Chart and Table Types	predefined formats for charts, tables, forms, and cells you can add to reports
Available Objects	the list of objects that you can add to reports (each object represents a set of data on the database)
Document Structure and Filters	an outline of how the document is structured and displays information on any filters that are used to filter the results
Navigation Map	hyperlinked bookmarks to the reports and sections in the document
User Prompt Input	information on any prompts that filter the results (you can input different values for the prompts and so retrieve different results to reports)
Find	search options to find a specific character or numeric string on the selected report page

To view an overview

1. Make sure the **Document Properties** pane is displayed to the left of the selected report.
To display the **Document Properties** pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box.

3. Select the overview you want to view.



The list you selected appears.

To print out the Document Summary

1. Make sure the **Document Properties** pane is displayed, to the left of the open report, and that **Document Summary** is selected.
2. Click **Printer Friendly**.
The **Printer Friendly Options** dialog box appears.
You can print all or part of the Document Summary information.
3. Select **General**, **Queries**, **Objects**, and **Prompts** as appropriate.
4. Click **OK**.
Web Intelligence connects to your default printer and displays the corresponding print options.
5. Follow your usual printing procedure.

Analyzing results

Overview

Drill analysis allows you to look deeper into the reasons behind results displayed in reports. This chapter includes information on:

- [how drill analysis works](#)
- [starting to drill](#)
- [drilling on tables](#)
- [drilling on section cells](#)
- [drilling on charts](#)
- [changing how drilled results are filtered](#)
- [drilling beyond report results](#)
- [saving drilled results and ending Drill mode](#)
- [using query drill](#)

How drill analysis works

Drilling on reports lets you look deeper into data to discover the details behind a good or bad summary result displayed on a table, chart, or section. For example if a table includes sales results per quarter and you want to analyze the results for each month in Q4, you can drill down on “Q4.” The drilled report displays the results for each month in Q4.

If you then want to analyze why a monthly result is significantly low or high in Q4, you can drill across to other business indicators included in the scope of the document, such as region or service. For example, if you drill by “Region,” the drilled report displays results for the drilled month in Q4 broken out by region. You could then identify which region was responsible for the low or high results in that specific month. Drilling thus enables you to explore the reasons behind results displayed on reports by analyzing different slices of data.

Starting to drill

To start analyzing reports using Drill, you need to switch to Drill mode.

Before your switch to drill mode, you need to verify that your drill options are set appropriately. To find out how to modify your drill options, see [“Selecting your Drill options”](#) on page 24.

Note: You can only drill on reports, if your security profile allows you.

To switch to drill mode



1. Verify that the report you want to analyze is selected.
2. Click the **Start Drill Mode** button on the main toolbar.
A hyperlink appears on each drillable result.

- "Drilling on tables" on page 46
- "Drilling on sections" on page 48
- "Drilling on charts" on page 50

Drilling on tables

You can drill on:

- **dimensions** - typically retrieve character-type data.

For example: customer names, line names, or dates

- **measures** – the result of calculations on data in the database

For example: [Revenue] is the calculation of the number of items sold multiplied by item price

When you drill on dimensions, the measures in the drilled table are calculated according to the dimensions to which you have drilled. For example, if you drill down **Year** to **Quarter**, the measures in the drilled table are calculated for quarter instead of year:

Analysis context:		
Year	Dresses	Sales revenue
2001	Dresses	\$549631
2002	Dresses	\$957395
2003	Dresses	\$1408595

Table before drill

Analysis context: 2001		
Quarter	Dresses	Sales revenue
Q1	Dresses	\$136431
Q2	Dresses	\$47633
Q3	Dresses	\$76501
Q4	Dresses	\$289066

Table after drill

When you drill on measures, you drill one dimension down each dimension in the table. For example, if you drill on **Sales** revenue for **Year** and **State**, the drill table shows sales revenue results for **Quarter** and **City**:

Analysis context:		
Year	State	Sales revenue
2003	Massachusetts	\$887169

← Table before drill

Analysis context: 2003 Massachusetts		
Quarter	City	Sales revenue
Q1	Boston	\$220301
Q2	Boston	\$220528
Q3	Boston	\$237464
Q4	Boston	\$208877

→ Table after drill

To drill down on a dimension value on a table



1. Verify you are working in Drill mode.

The **Start Drill Mode** button is pressed in when you are in Drill mode.

2. Click the value you want to analyze.

For example, click the name of a customer or product, or click a date.

Drillable values are indicated by hyperlinks.

The drilled results appear on the table.

A filter drop-down box appears at the top of the report. This indicates that the value you drilled is filtering the results displayed on the drilled table.

Analysis context:	
Texas	▼

For example, if you drill on [Texas], then the filter displays “Texas” to indicate that the results displayed on the drilled table are only for Texas.

To drill up on a dimension value on a table



1. Verify you are working in Drill mode.

The **Start Drill Mode** button is pressed in when you are in Drill mode.

2. Right-click the drillable dimension, then click **Drill Up** on the Drill menu.

Dimensions where you can drill up display the drill up arrow.

Or

Click the **Drill Up** icon in the column header of the dimension value you want to analyze.

The drilled report now displays data one dimension level up.

If a filter has been created in the Drill toolbar due to a drill down action, the filter is removed when you drill up.

To drill across dimensions using Drill by

1. Verify you are working in Drill mode.



The **Start Drill Mode** button is pressed in when you are in Drill mode.

2. Right-click the drillable dimension, then click **Drill By...** on the Drill menu. A series of sub menus list the dimensions to which you can drill.
3. Select the dimension you want to analyze. The drilled results appear on the table.

To drill on a measure value on a table



1. Verify you are working in Drill mode. The **Start Drill Mode** button is pressed in when you are in Drill mode.
2. Right click or rest your pointer on the measure value on which you want to drill. A contextual menu or ToolTip indicates the next dimension(s) in each related drill path.

Year	Lines	State	Sales revenue
2003	Accessories	California	\$325803
2003	City Skirts	California	\$410
2003	City Trousers	California	\$14316
2003	Dresses	California	\$235059

Drill Down to Quarter, Category, City

3. Click the hyperlinked measure or click the option in the Drill menu. The report now displays data one dimension level down.

Analysis context: 2003 Accessories California

Quarter	Category	City	Sales revenue
Q1	Belts,bags,wallets	Los Angeles	\$19800
Q1	Belts,bags,wallets	San Francisco	\$16522
Q1	Hair accessories	Los Angeles	\$4914
Q1	Hair accessories	San Francisco	\$2239

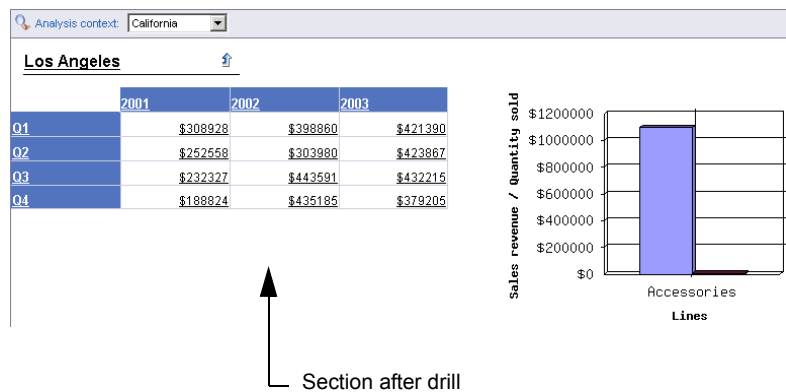
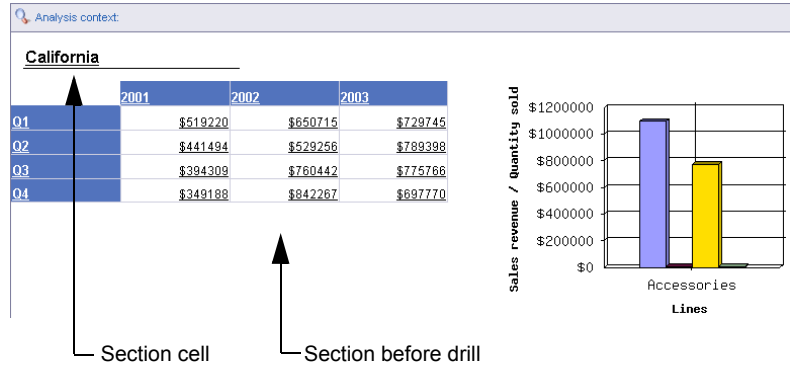
A filter for each related dimension value appears as a list box in the Drill toolbar. These filters represent the dimension values that you replaced by your drill action. In the example above, filters for Year, Lines, and State appear in the Drill toolbar.

NOTE: If the drilled report includes dimensions from multiple queries, a ToolTip appears when you rest your cursor on the value displayed on the filter. The ToolTip displays the name of the query and the dimension for the value.

Drilling on sections

To perform drill analysis on results in sections of reports, you drill on the value displayed in the section cell. When you drill on section cell, the results on all of the tables or charts in the drilled section are modified by your drill action. For example, if you drill on a section

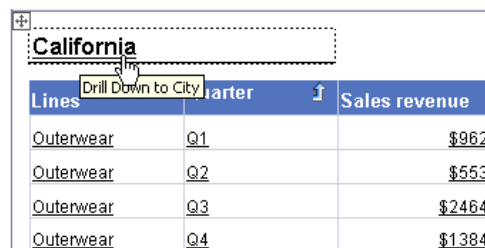
cell that displays a value for **State**, such as “California,” the tables or charts in the drilled section display results for **City**:



To drill on a section cell



1. Verify you are working in Drill mode.
The **Start Drill Mode** button is pressed in when you are in Drill mode.
Drillable values are indicated by hyperlinks.
2. Right click or rest your pointer on the measure value on which you want to drill.
A contextual menu or ToolTip indicates the next dimension(s) in each related drill path.



3. Click the option in the Drill menu or click the hyperlinked value.
The drilled results appear in the section. A filter for each related dimension value appears as a list box in the Drill toolbar. These filters represent the dimension values that you replaced by your drill action.

Drilling on charts

You can drill on:

- chart body – drills to the next dimension up or down and displays the values for the drilled dimension on the X-axis. The measures displayed on the chart body are re-calculated according to the drilled dimension.
- pie chart legends – this is useful, if you are working with a pie chart, because the axis labels, which display the names of the dimensions represented by each pie segment, are not often displayed. Also, when a result is low, the segment of the pie can be too small to drill.

To drill down on a chart

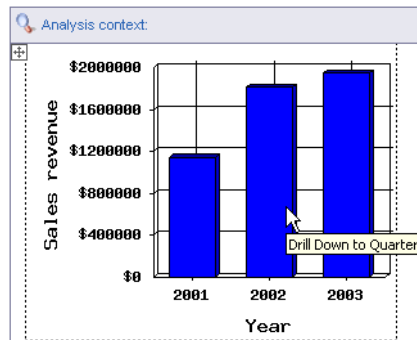


1. Verify you are working in Drill mode.

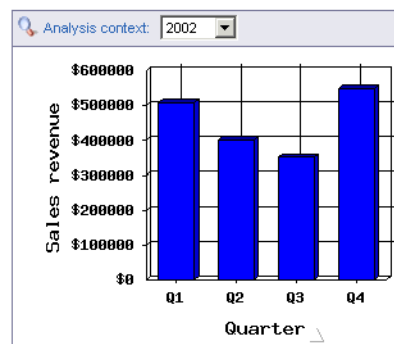
The **Start Drill Mode** button is pressed in when you are in Drill mode.

2. Right click or rest your pointer on the chart bar or marker on which you want to drill down.

A contextual menu or ToolTip indicates the next dimension(s) in each related drill path.



3. Click the option in the Drill menu or click the chart bar, line, or marker directly.
The drilled results appear in the chart.



A filter for each related dimension value appears as a list box in the Drill toolbar. These filters represent the dimension values that you replaced by your drill action.

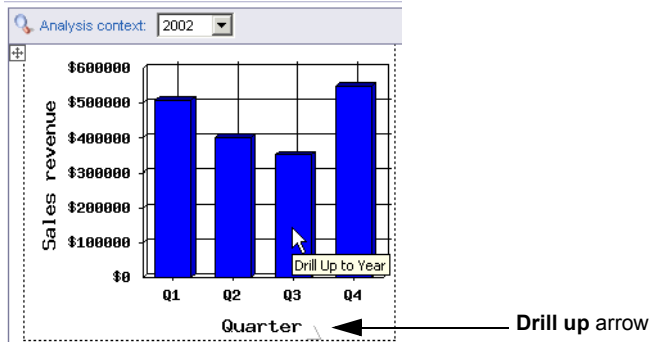
To drill up on a chart



1. Verify you are working in Drill mode.

The **Start Drill Mode** button is pressed in when you are in Drill mode.

2. Right click or rest your pointer on the chart bar or marker on which you want to drill up.
3. Click the **Drill Up** arrow on the chart axis or click the chart bar, line, or marker directly.



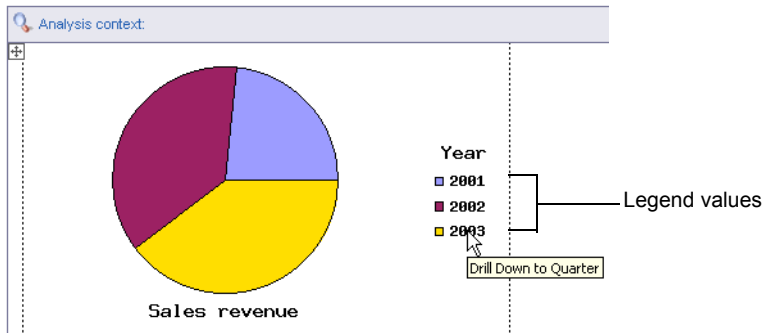
The drilled results appear in the chart.

To drill on pie chart legend

1. Verify you are working in Drill mode.

The **Start Drill Mode** button is pressed in when you are in Drill mode.

2. Right click or rest your pointer on the legend value on which you want to drill down.



The drilled results appear in the pie chart.

Changing how drilled results are filtered

When you drill on a dimension or measure value in a table or chart, Web Intelligence filters the drilled results by the dimension or measure you drilled on. The filter is applied to all of the results displayed on the drilled report.

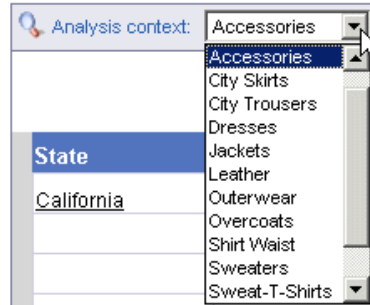
For example, if you drill down on a table cell displaying “California,” to view results for cities in California, Web Intelligence filters the values in the entire report for California and only displays results for California in the report. If you want to see results for cities in a different US state, such as Florida, on the drilled report you can simply change the filter value by selecting “Florida” from the drill filter list box.

Note: You can set your **Web Intelligence Document Preferences** so that the Drill filters are either shown or hidden during your drill sessions. For information on how to do this, see ["To set your drill options"](#) on page 27.

To change the values that filter drilled results



1. Verify you are working in Drill mode.
The **Start Drill Mode** button is pressed in when you are in Drill mode.
2. In the Drill toolbar, click the drop-down arrow in the appropriate list box.



Each dimension value associated with that filter appears.

3. Click the value you want.
Or
If you want to remove the filter, scroll to the top of the list, and then select () <ObjectName>

For example, to remove the filters on the [Lines] dimension, select:

() Lines

The report displays results based on the new dimension value.

Drilling beyond report results

When you are drilling a Web Intelligence report, you may want to drill up or down to a dimension that lies outside the scope of analysis defined for the document. To return the additional data, Web Intelligence must run a new query that includes the additional dimension(s) you specify. This is called extending the scope of analysis.

When you extend the scope of analysis, you can select filters to limit the data Web Intelligence retrieves when running the new query. This saves time, if you are working with a large document. If you have several reports in one document, and you select filters when you extend the scope of analysis, those filters affect all the reports in the document.

Note: You can only extend the scope of analysis during your drill sessions, if your security profile allows you. Your security profile is controlled by your administrator.

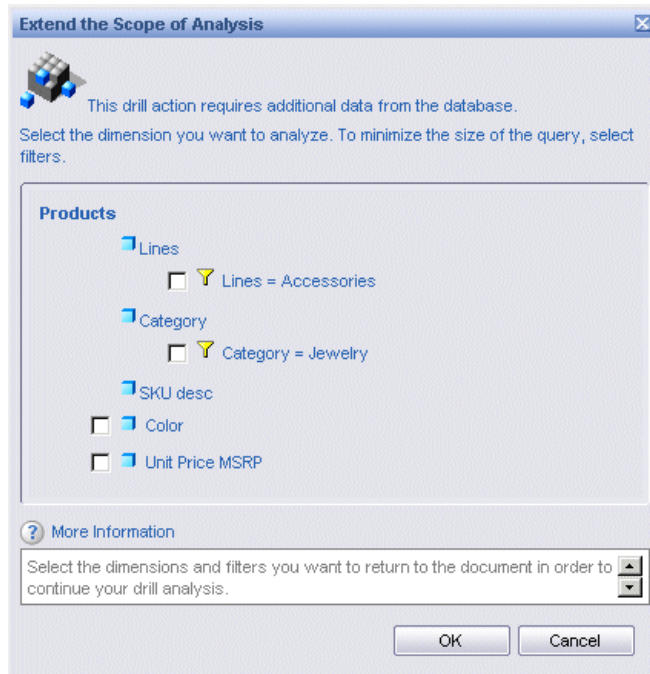
If your Drill options are not set to display the Extend the Scope of Analysis prompt message during drill, you will not be given the option to select filters if you drill beyond the data already available in the document. In this case, Web Intelligence immediately runs a new query and returns data for *all* the values on the dimensions you are drilling. To find out how to modify your drill options see, “[To set your drill options](#)” on page 27.

To extend the scope of analysis

1. While in drill mode, drill on a cell value for which no further details are included in the data definition behind the reports.

A ToolTip informs you that a new query is necessary to return the additional data to the document.

If your Drill options are set for Web Intelligence to prompt you when a drill action requires a new query, the **Extend the Scope of Analysis** dialog box appears.



The dialog box lists the dimensions in the hierarchy above and below the drilled value. A check box appears next to each dimensions below the current dimension you are drilling, so that you can select which of these dimensions you want to retrieve from the database, in order to continue your drill action. The dialog box also displays the filters that you can select to filter the new query. For example, in the illustration above, Web Intelligence suggests you filter the query by limiting the additional data for Lines and Category to data

for the Accessories line and the Jewelry category. If you don't select the filter, Web Intelligence will return data for all product lines and categories to the document.

1. Select the check box(es) next to the dimension(s) to which you want to drill.
Selecting filters to limit the new data to data necessary for your drill session reduces the time Web Intelligence needs to retrieve the data to the report and minimizes the size of the document.
2. Select the check box(es) next to the filters you want to use to filter the query.
3. Click **OK**.
Web Intelligence runs a new query and returns the additional data to the document. The results for the dimension you drilled to appear on the table.

NOTE: You need permission from your administrator to drill out of the scope of analysis during a drill session.

Saving drilled results and ending Drill mode

When you have finished analyzing results on reports using drill, there are several ways to save the drilled results and end your drill session.

- take a snapshot – enables you to keep a record of the drilled results in a static format. You can then continue your drill analysis on a duplicate report and keep snapshots of different analyses you perform on the same results.
(For information on duplicating reports, see ["To duplicate a report"](#) on page 77.)
- save the drilled report in drilled mode – enables you to save the results you drilled to and keep the report drillable for further analysis during another session
- end drill mode – enables you to save the drilled results in a static format. If you drilled on the original report you lose the results displayed prior to your drill session. If you drilled on a duplicate report, you retain the results prior to your drill session on the original report and keep a copy of the drilled results in static format on the duplicate report.
(For information on how to set your drill options to create a duplicate of the original report each time you start drill, see ["To set your drill options"](#) on page 27.)

To take a snapshot of drilled results



1. Verify you are working in Drill mode.
The **Start Drill Mode** button is pressed in when you are in Drill mode.
2. Click the **Snapshot** button on the main toolbar above the report.
Web Intelligence saves a copy of the drilled report in results mode.



To save a report in drill mode



1. Verify you are working in Drill mode.
The **Start Drill Mode** button is pressed in when you are in Drill mode.
2. Click **Save** on the toolbar above the displayed report.

The InfoView **Save** page opens.

3. Save the document in the usual way.

For full information, see ["To save a new Web Intelligence document in InfoView"](#) on page 248.

The next time the document is opened, it opens in Drill mode.

To end drill mode



1. Verify you are working in Drill mode.

The **Start Drill Mode** button is pressed in when you are in Drill mode.

2. Click the **Start Drill Mode** button.

Web Intelligence returns the drilled report to results mode. The drill filters and the hyperlinks on drillable values no longer appear.

Using query drill

You can set Web Intelligence to drill in *query drill* mode, which behaves differently from the standard drill mode described so far in this chapter. When you activate query drill, Web Intelligence drills by modifying the underlying query (adding and removing dimensions and query filters) in addition to applying drill filters.

Example: Drilling down from Month to Week

In this example, Month is the lowest dimension currently available in the query from a time hierarchy, and Week is the dimension immediately below it in the hierarchy.

If you drill down on Month = January, three things happen:

- Web Intelligence adds Week to the query scope of analysis.
- Web Intelligence adds a query filter to restrict Month to January.
- Web Intelligence adds a drill filter to restrict Month to January.

If you drill up from Week to Month, the process is reversed:

- Web Intelligence removes Week from the query scope of analysis.
- Web Intelligence removes the query filter.
- Web Intelligence removes the drill filter.

Note: Drill filters are not strictly necessary in query drill mode. Web Intelligence applies them for consistency with standard drill mode. For example, the `DrillFilters()` function returns the correct value in query drill mode because Web Intelligence applies drill filters to match the query filters.

For information on how to activate query drill, see ["Activating query drill"](#) on page 57.

When do you use query drill?

You use query drill when your report contains aggregate measures calculated at the database level. It is designed in particular to provide a drill mode adapted to databases such as Oracle 9i OLAP, which contain aggregate functions that Web Intelligence either does not support, or cannot calculate accurately at the report level during a drill session.

The kinds of aggregate functions that are candidates for drilling in query drill mode are: percentages, distinct counts, ranks, standard deviations and variances, running aggregates, lead and lag functions. Because query drill modifies the query at each drill operation, it ensures that these aggregates are recalculated by the server each time you drill.

Query drill is also useful for reducing the amount of data that Web Intelligence must store locally during a drill session. Because query drill reduces the scope of analysis when you drill up, Web Intelligence is able to purge unnecessary data.

Drilling with query drill

Drilling down

When you drill down, query drill behaves similarly to standard drill at the point where the data moves outside the scope of analysis.

When Web Intelligence filters a drilled dimension in query drill mode it does so by adding a *query* filter in addition to a drill filter. For example, if you drill on Year=2001, Web Intelligence adds a filter at the query level to restrict the Year dimension to 2001. For this reason, the only value that appears in the drill toolbar for the drilled dimension is the value on which you drilled (in this case 2001). This is different from standard drill mode, in which all values of the dimension are visible in the toolbar. As a result, you cannot change filter values in query drill mode (for example, drill on Year=2001 then switch to Year=2003) as you can in standard drill mode.

Because query drill automatically extends the scope of analysis, you can use it only if your BusinessObjects XI administrator has granted you the the right to drill outside the scope. See your administrator for more details.

Drilling up

When you drill up, query drill removes dimensions from the query. For example, if you drill up from Month to Quarter, Web Intelligence removes Month from the query. This has two consequences:

- Query drill is incompatible with drill snapshots. For more information, see "[Query drill and drill snapshots](#)" on page 57.
- Web Intelligence does not allow you to drill up beyond any dimension that appears as one of the report objects. For example, if your report displays Year, Quarter and Revenue, you cannot drill up from Quarter to Year because this would remove quarter from the list of report objects.

Query drill and the scope of analysis

Query drill adds and removes dimensions from the scope of analysis in response to drill actions. For this reason, you cannot set the scope of analysis manually when using query drill. In addition, you cannot activate query drill if your document already has a scope of analysis defined. In this case the option is unavailable. You must remove the scope of analysis to make it available.

Query drill and other reports based on the same data provider

If your document contains other reports that contain dimensions on which you drill in query drill mode, these reports are affected because the query drill modifies the dimensions they contain.

Example: Drilling on a dimension that appears in another report

If you have two reports based on a query that contains Year, Quarter and Sales Revenue, and you use query drill to drill down to Year = 2001 on the first report, Web Intelligence also filters the data for Year in the second report to include 2001 only.

You can avoid this (at the cost of retrieving duplicate data into Web Intelligence) by creating a new data provider and rebuilding the other report against it. Now when you drill in query drill mode, the other report remains unaffected.

Query drill and drill snapshots

Do not use drill snapshots when working in query drill mode, because query drill means that snapshots cannot be guaranteed to stay the same. (For more information on snapshots, see ["Saving drilled results and ending Drill mode"](#) on page 54.)

In query drill mode, snapshots change when you drill up beyond a dimension that you included in a snapshot. Because the drill up removes the dimension from the underlying query, it also removes the dimension from the snapshot.

Activating query drill

You activate query drill at the document level.

To activate query drill

1. Click **Document > Properties** on the Main toolbar.
The Document Properties dialog box appears.
2. Click **Use query drill**.

NOTE: If your report already has a scope of analysis defined, the option is unavailable. You must remove the scope to make it available.

Merging dimensions from multiple data providers

Overview

This chapter describes how to synchronize multiple data providers in a Web Intelligence report by merging them on common dimensions. After merging common dimensions you can place dimensions from different data providers in the same block.

Merged dimensions and data synchronization are new in Web Intelligence XI R2. They enormously increase the power and flexibility of Web Intelligence by allowing you to *synthesize* data from different sources in the same report, rather than simply *including* the data.

For example, if you have one database that contains detailed customer information and another database that contains sales data, you can synchronize the two data sources around the customer.

Note: This chapter provides basic information on merging dimensions in Web Intelligence in HTML mode. For more detailed information on merged dimensions and synchronization, see the “Merging Dimensions from Multiple Data Providers” chapter in the *Building Reports Using the Web Intelligence Java Report Panel Guide*. You can also find further information on the behavior of merged dimensions in the *BusinessObjects Report Conversion Guide*.

Synchronizing data providers through merged dimensions

Web Intelligence allows you to *synchronize* multiple data providers in the same document. This allows you to build reports which synchronize data from multiple sources. When you synchronize queries through merging, you can include report objects from different queries in the same report block.

To create a merged dimension

1. Select the group of dimensions from different data providers that you want to merge in the **Available Objects** section of the Left Panel by holding down the Ctrl key as you select the dimensions. (For information on creating documents that contain multiple data providers, see the *Building Queries Using Web Intelligence Query – HTML* guide.)
2. Click **Merge** at the top of the Left Panel.

Web Intelligence creates a merged dimension with the same name, description, qualification and data type as the first dimension you selected.

The original dimensions that make up the merged dimension appear beneath it when you expand the merged dimension.

If you select any of these original dimensions, **Merge/Unmerge** is unavailable.

To remove a merged dimension

1. Select the merged dimension in the **Available Objects** section of the Left Panel.
The **Merge** button at the top of the Left Panel becomes the **Unmerge** button when you select a merged dimension.
2. Click **Unmerge**.

To edit a merged dimension

1. Right-click the merged dimension in the **Available Objects** section of the Left Panel then select **Edit Properties** on the menu to display the Create Merged Dimension dialog box.



2. Type the merged dimension name in the **Merged Dimension Name** in the Merged Dimension dialog box.
3. Type the description in the **Description** box.
Select the dimension that provides default properties for the merged dimension in the **Source Dimension** dialog box.

Merging dimensions automatically

You can tell Web Intelligence to merge dimension automatically when the dimensions come from the same universe, have the same name and the same data type.

To merge dimensions automatically

1. With a Web Intelligence document open, click the arrow next to **Document** on the main toolbar above the report.
2. Select **Properties**.
The **Document Properties** dialog box appears.

3. Select **Auto-merge dimensions**

Inserting and organizing reports

Overview

Web Intelligence documents can contain multiple reports. This chapter tells you how to:

- [insert, delete, and move reports in documents](#)
- [name reports](#)
- view document properties

Inserting, deleting, and moving reports

In a single document, you can:

- insert new reports – allows you to display different sub-sets of the document information on different reports
- duplicate reports – allows you to copy an existing report and then modify it, instead of creating a new report from scratch
- move reports – allows you to re-order the reports in a document
- delete reports – allows you to remove unnecessary reports from a document

To insert a new report

1. With a Web Intelligence document open, right-click the report tab of the report after which you want to insert a new report.

The contextual menu appears.

2. Select **Insert**.

A blank report appears after the report you selected. Web Intelligence numbers the report according to where it is located in the document. To find out how to rename the report, see ["To rename a report by typing the new name onto the report tab"](#) on page 78.

To duplicate a report

1. With a Web Intelligence document open, right-click the report tab of the report after which you want to insert a new report.

The contextual menu appears.

2. Select **Duplicate**.

Web Intelligence inserts a duplicate of the report into the document.

To move a report

1. With a Web Intelligence document open, right-click the report tab of the report after which you want to insert a new report.

The contextual menu appears.

2. Select **Move.**

A sub-menu appears. You can select where you want to move the report here.

3. Click the appropriate option:

to the beginning of the document,	First
before the selected report,	Previous
after the selected report,	Next
to the end of the document,	Last

Web Intelligence moves the report to where you selected.

To delete a report

1. With a Web Intelligence document open, right-click the report tab of the report after which you want to insert a new report.

The contextual menu appears.

2. Select **Remove.**

A message asks you to confirm that you want to delete the report.

3. Click **Yes.**

Web Intelligence deletes the report from the document.

Naming reports

When you create a new report, Web Intelligence names the report “Report 1” by default. You can rename the report to give the report a more meaningful name. If you have several reports, naming each report makes it easier to navigate through the document.

If you are working with a document that has already been created, you can rename the existing reports. There are two ways to rename reports:

- by typing the new name onto the report tab
- using the Format Report dialog box

To rename a report by typing the new name onto the report tab

1. With a Web Intelligence document open, right-click the report tab of the report you want to rename, and then select **Rename on the contextual menu.**

Or

Double-click the report tab.

2. Type the new name into the text box on the report tab.

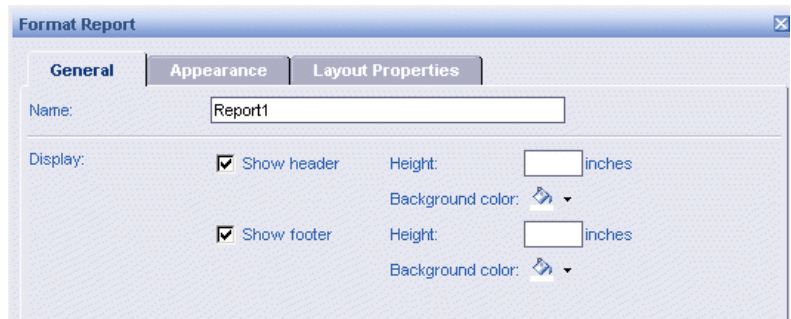
NOTE: When you rename reports in a document that you want to save as an Excel spreadsheet, the names of reports must not include more than 31 characters or include spaces or the following special characters: * : \ / []

3. Press **Enter**.

The new name appears on the report tab.

To rename a report using the Format Report dialog box

1. Right-click an empty area of the report.
The contextual menu appears.
2. Click **Format Report**.
The **Format Report** dialog box appears.
3. Click the **General** tab.



4. In the **Name** text box, type the name you want to give to the report.
5. Click **OK**.
Web Intelligence displays the new name on the report tab of the selected report.

Viewing document properties

You can view document information and set the properties for documents. You can view the following properties for a document:

Title	The name of the document in InfoView.
Author	The creator of the document.
Description	Optional information that describes the document.
Keywords	Optional keywords that can be used to search for the document in InfoView.

Last refresh date	Informs you when the results were last refreshed with the latest data from the database.
Duration of the previous Refresh	Informs you how long it took for Web Intelligence to retrieve the data from the database the last time the results were refreshed.
Locale	Tells you the formatting locale of the document.
Version	Tells you the version of Web Intelligence software used to create the document.
Previous version	If the document was upgraded from a previous version of Web Intelligence software, the Web Intelligence version used to create the original document appears here.
Enhanced viewing mode	When this option is checked, the appearance of reports is optimized for onscreen viewing. (See "Using Enhanced viewing mode for onscreen viewing" on page 38.)
Refresh on Open	When this option is checked, Web Intelligence automatically refreshes the results in reports with the latest data from the database each time the document is opened. (See "To set a document to refresh automatically when it is opened" on page 34.)
Use query drill	When this option is checked, Web Intelligence drills in <i>query drill</i> mode. For more information on query drill and how it differs from standard drill, see the chapter "Setting up Documents for Drill Analysis" in the <i>Building Reports Using the Web Intelligence Java Report Panel</i> guide.

Auto-merge dimensions	<p>When this option is checked, Web Intelligence automatically merges dimensions with the same name and from the same universe. You see the merged dimension in the list of available objects with the dimensions merged within it below.</p> <p>Merged dimensions are the Web Intelligence mechanism for synchronizing data from different data providers.</p> <p>For more information, see "Merging dimensions from multiple data providers" on page 59.</p>

Note: You set the document title, description, and keywords when you save a document. (See "[To save a new Web Intelligence document in InfoView](#)" on page 248.)

To view document properties

1. With a Web Intelligence document open, click the arrow next to **Document** on the main toolbar above the report.
2. Select **Properties**.
The **Document Properties** dialog box appears.

Formatting report pages

Overview

You can format the page layout of Web Intelligence reports to create presentation-level documents. This chapter tells you how to:

- [define the page layout of reports](#) – margins, page orientation and page size, page headers and footers, and page numbers
- [include titles on reports](#)
- [include cells with predefined formulas](#)
- insert images
- [insert and format hyperlinks](#)
- [inserting HTML](#)

Defining report page layout

This section tells you how to:

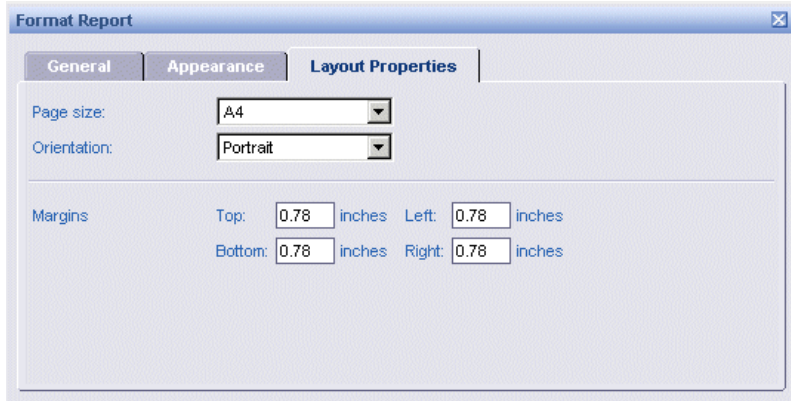
- set margins
- set page orientation
- select paper size
- include page headers and footers
- include page numbering

Note: It is recommended that you view reports in **Page Mode** when you specify page layout. This enables you to see the impact of your modifications to the selected report. To find out how to switch to **Page Mode**, see [“Viewing reports in page mode and draft mode”](#) on page 39.

To set margins

1. Right-click an empty area of the report.
The contextual menu appears.
2. Click **Format Report**.
The **Format Report** dialog box appears.

3. Click the **Layout Properties** tab.



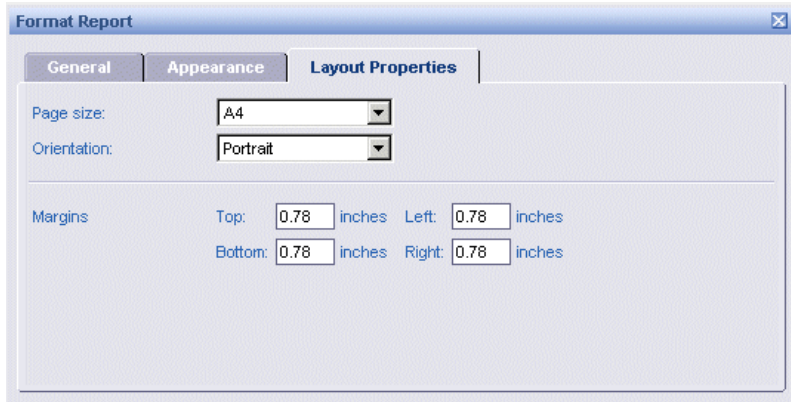
4. In the **Margins** section, type the measurement you want for the **Top**, **Bottom**, **Left**, and **Right** margins.

5. Click **OK**.

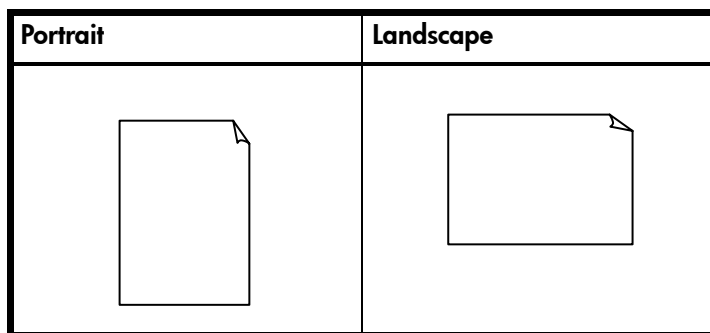
Web Intelligence applies the margin settings you specified to the selected report.

To set page orientation

1. Right-click an empty area of the report.
The contextual menu appears.
2. Click **Format Report**.
The **Format Report** dialog box appears.
3. Click the **Layout Properties** tab.



4. In the **Orientation** section, click the arrow next to the list box, and then select **Portrait** or **Landscape** as appropriate:

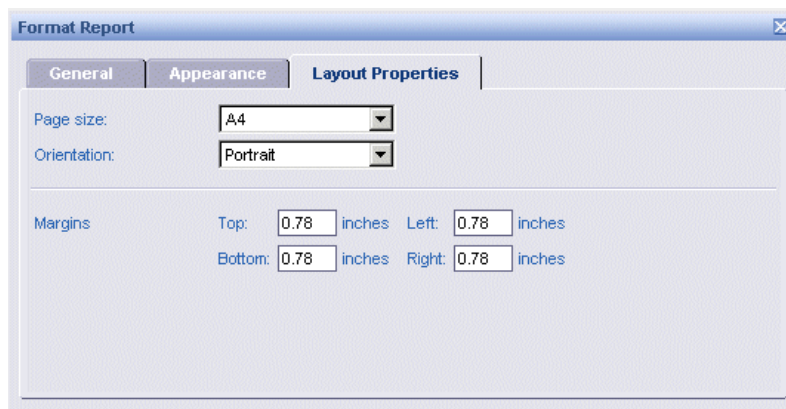


1. Click **OK**.

Web Intelligence applies the page orientation you specified to the selected report.

To select paper size

1. Right-click an empty area of the report.
The contextual menu appears.
2. Click **Format Report**.
The **Format Report** dialog box appears.
3. Click the **Layout Properties** tab.



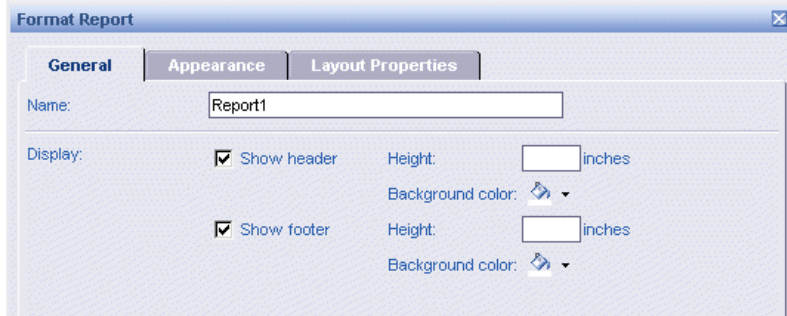
4. In the **Page size** section, click the arrow next to the list box, and then select the appropriate page size.
5. Click **OK**.

Web Intelligence applies the page size you specified to the selected report.

To include a page header or page footer

1. Right-click an empty area of the report.
The contextual menu appears.

2. Click **Format Report**.
The **Format Report** dialog box appears.
3. Click the **General** tab.



4. To include a page header, select **Show header**, and then type the height you want for the header into the text box.
5. To include a page footer, select **Show footer**, and then type the height you want for the footer into the text box.

NOTE: If you want to use a different measurement unit from the one currently displayed. (For example, if the current unit is inches and you want to use centimeters), you can change the measurement in your **My Workspace** preferences. To find out how to do this, see ["To set the display properties of your Web Intelligence workspace"](#) on page 29.

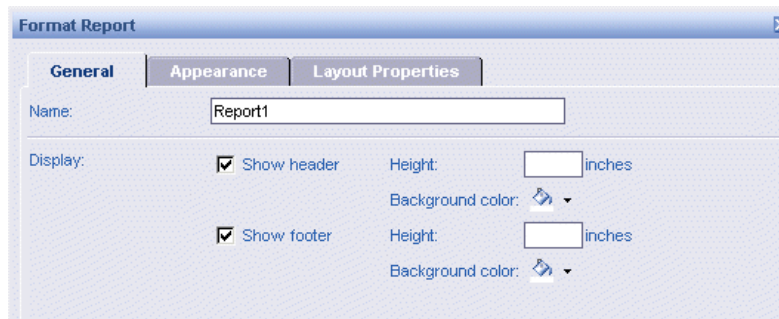
6. If you want to define a background color for the header or footer, refer to step 4 below.
7. Click **OK**.
Web Intelligence inserts the headers and footers you specified into the selected report.

NOTE: You need to define page headers and page footers for each report.

To define a background color for page headers and footers

1. Right-click an empty area of the report.
The contextual menu appears.
2. Click **Format Report**.
The **Format Report** dialog box appears.

3. Click the **General** tab.

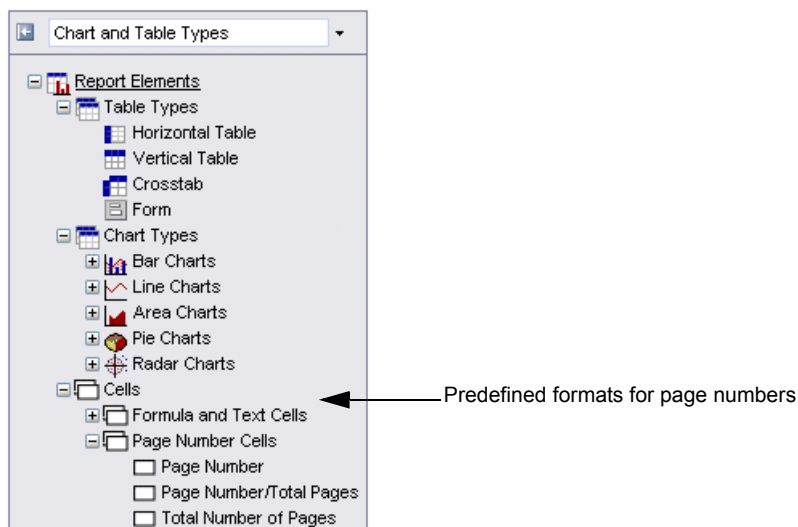


4. Click the arrow next to **Background color**, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.
5. Click **OK**.
Web Intelligence applies the color(s) you selected to the headers and footers on the selected report.

To include page numbers

1. Verify that the Document Properties pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
The categories of chart, table, and cell types appear.
3. If the **Cells** category is not visible, click the + next to **Report Elements**.
4. Click the + next to **Cells**.
5. Click the + next to **Page Number Cells**.

The available page number formats are listed here.



The following table provides examples of the three formats:

To display...	for example,	select...
the page number of the current report page,	1	Page Number
the page number of the current report page over the total number of pages in the report	1/50	Page Number/Total Pages
the total number of pages in the current report,	50	Total Number of Pages

1. Select the appropriate page number format and drag it onto a blank area of the report.

The page number appears on each page of the report.

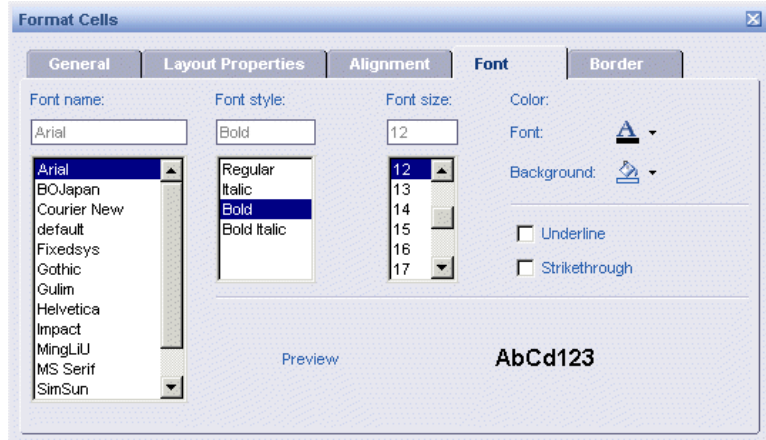
You can define formatting properties for the page number cell, such as a background color or font style. You can also type text before or after the page number. For example, you can type "Page:" before the special field that displays the number of each page, in order to display "Page: 1, Page: 2" and so on. To find out how to format and modify the text in page number cells, see ["To format and modify the text in page number cells"](#) on page 88.

To format and modify the text in page number cells

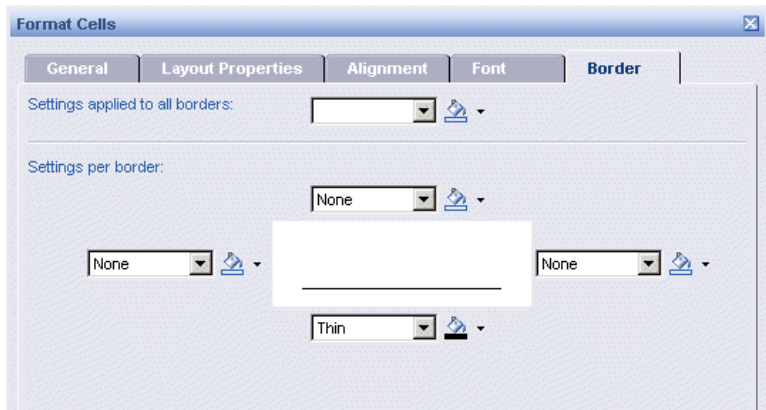
1. Right-click the page number cell on the report.
If you have not yet inserted a page number cell onto the report, refer to ["To include page numbers"](#) on page 87.
2. On the contextual menu, select **Format > Cell**.

The **Format Cells** dialog box appears.

3. To format how the text and cell background appears, click the **Font** tab, and then select the appropriate settings.



4. To format how the borders around the page number cell appear, click the **Border** tab, and then select the appropriate settings for borders.



You can apply the same colors and styles to all borders in the **Settings applied to all borders** section. You can also apply specific colors and styles to one or multiple borders using the options in the **Settings per border** section.

5. To align the page number text on the cell, click the **Alignment** tab, and then specify the appropriate **Horizontal** and **Vertical** alignment settings.
6. To enter text before or after the special field that displays the page numbers, click **General** and then type the text into the **Name** text box.

NOTE: Type the text you want to display *before* the [bracket or after the] bracket. You must not type any text inside the [] brackets.

7. Click **OK**.

Web Intelligence applies the settings you specified to the page number cell on the selected report.

Including titles on reports

You can display a title in a report. This is useful if you want to print the report, and distribute it to colleagues. The report title appears at the top of the report page.

To add a title to a report and format its display properties

1. Verify that the Document Properties pane is displayed to the left of the selected report. To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.

2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.

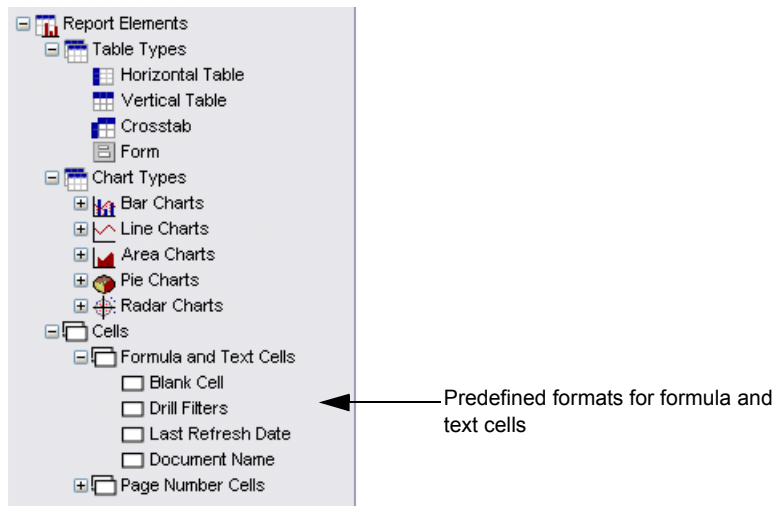
The categories of chart, table, and cell types appear.

3. If the **Cells** category is not visible, click the + next to **Report Elements**.

4. Click the + next to **Cells**.

5. Click the + next to **Formula and Text Cells**.

The available cell formats are listed here.

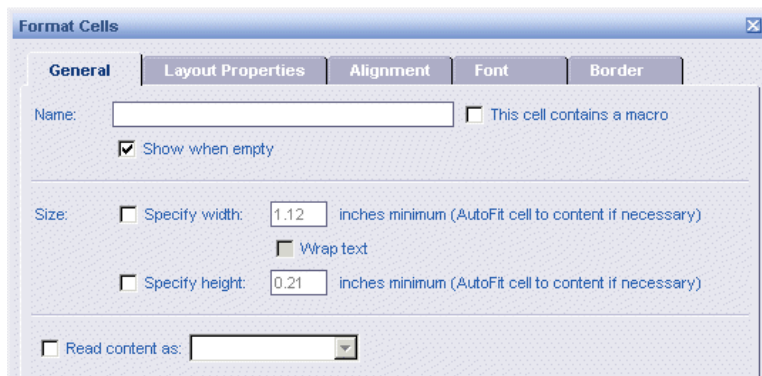


6. Select the **Blank Cell** format and drag it onto the area of the report page where you want to display the report title.

The blank cell appears on the report.

7. Right-click the cell.

8. On the contextual menu, select **Format > Cell**.
The **Format Cells** dialog box appears.
9. Click the **General** tab.



10. Type the title you want to give the report into the **Name** text box.
11. In the **Size** section, specify the width and height of the report title cell and select **Wrap text**, if you want to continue the title onto the next line.
12. Leave the **Read content as** option blank.
13. To format how the text and cell background appears, click the **Font** tab, and then select the appropriate settings.
14. To format how the borders around the page number cell appear, click the **Border** tab, and then select the appropriate settings for borders.
You can apply the same colors and styles to all borders in the **Setting applied to all borders** section. You can also apply specific colors and styles to one or multiple borders using the options in the **Settings per border** section.
15. To align the page number text on the cell, click the **Alignment** tab, and then specify the appropriate horizontal and vertical alignment settings.
16. Click **OK**.
Web Intelligence displays the report title on the report with the formatting settings you specified.

Including cells with predefined formulas

You can include single cells in reports that:

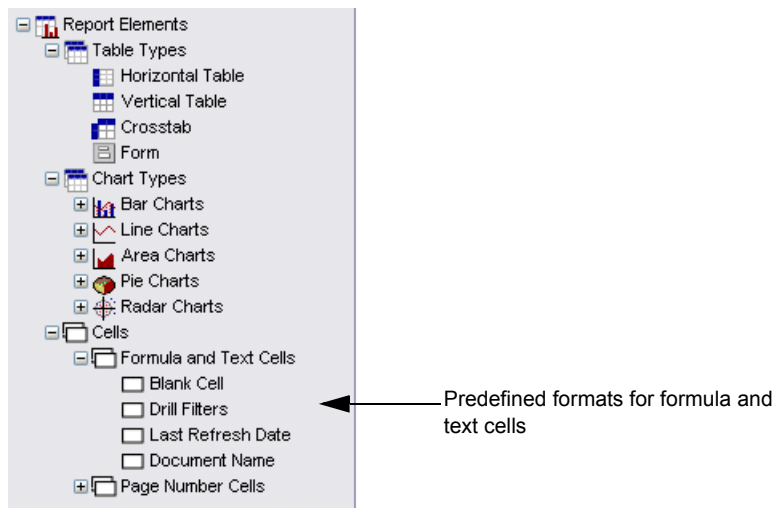
- contain predefined formulas – with information on the document name, the last date the data in the reports was refreshed, or about the filters applied to reports during a drill session
- allow you to type custom formulas – so you can define formulas or calculations of your choice

Note: You can also include page numbering, (see “[To include page numbers](#)” on page 87) and insert a blank cell and then type text, such as a comment or message to report reviewers (see “[To insert a free standing cell](#)” on page 104.)

To include a formula to display document information

1. Verify that the Document Properties pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
The categories of chart, table, and cell types appear.
3. If the **Cells** category is not visible, click the + next to **Report Elements**.
4. Click the + next to **Cells**.
5. Click the + next to **Formula and Text Cells**.

The available cell formats are listed here.



6. Select the formula cell that you want to include on the report.

The following table provides information about each type of formula:

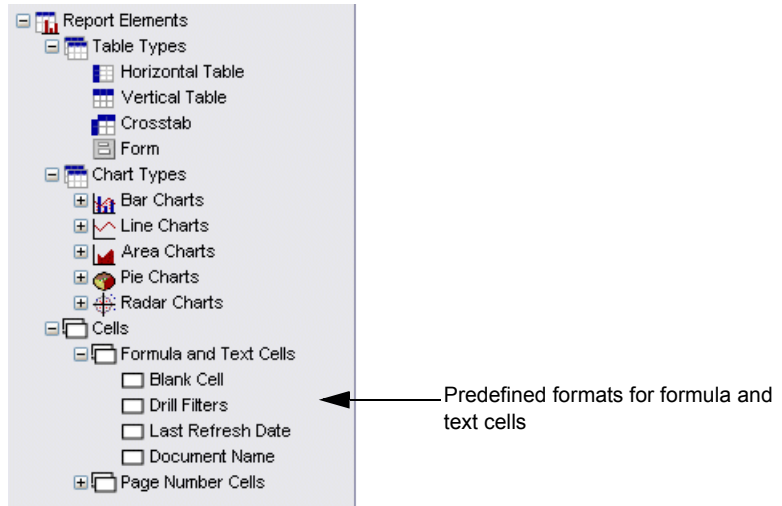
the filters applied to results during a drill session, NOTE: For full information about drill analysis, see " Analyzing results " on page 45.	Drill Filters
the date the last time the results in reports were refreshed with up-to-date data on the database,	Last Refresh Date
the title of the document as it is listed in InfoView,	Document Name

1. Drag the selected cell onto the area of the report page where you want to display the formula.
The formula cell appears on the report.
2. If you want to change the formatting properties of the text or the cell background or border, right-click the cell, and then on the contextual menu, select **Format > Cell**.
You can select format options on the **Font**, **Border**, and **Alignment** tabs.
3. Click **OK**.
Web Intelligence displays the cell you selected on the report with the format settings you specified.

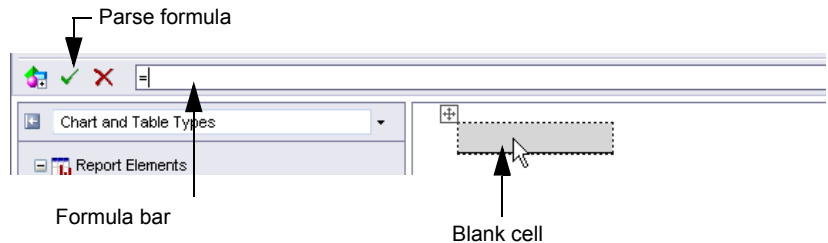
To include a blank cell to display a custom formula

1. Verify that the Document Properties pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
The categories of chart, table, and cell types appear.
3. If the **Cells** category is not visible, click the **+** next to **Report Elements**.
4. Click the **+** next to **Cells**.
5. Click the **+** next to **Formula and Text Cells**.

The available cell formats are listed here.



6. Select the **Blank Cell** format and drag it onto the area of the report page where you want to display the report title.
The blank cell appears on the report.
7. Verify that the **Formula** bar is displayed above the report.
To display the **Formula** bar, right-click the main toolbar above the report, and then click **Formula** on the contextual menu.
8. In the **Formula** bar, type "=" followed by the formula you want, then click the green check mark to parse the formula syntax.



Web Intelligence validates the formula and inserts it into the blank cell on the report.

Inserting images

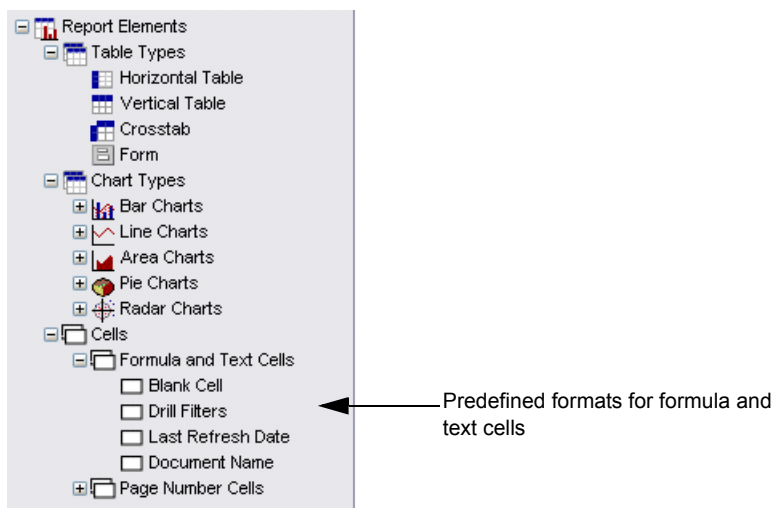
You can insert images in Web Intelligence reports. For example, you can insert a company logo or images of the products the report highlights.

This section tells you:

- how to insert images in free standing cells
- how to select images to display on the background of reports

To insert an image in a free standing cell

1. Verify that the Document Properties pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
The categories of chart, table, and cell types appear.
3. If the **Cells** category is not visible, click the **+** next to **Report Elements**.
4. Click the **+** next to **Cells**.
5. Click the **+** next to **Formula and Text Cells**.
The available cell formats are listed here.



6. Select the **Blank Cell** format and drag it onto the area of the report page where you want to display the report title.
The blank cell appears on the report.
7. Right-click the cell.
8. On the contextual menu, select **Format > Cell**.
The **Format Cells** dialog box appears.
9. Select the **General** tab.

10. Type the URL of the image in the **Name** box as described in the following table:

<p>the image file has been installed by your administrator in the images directory on the BusinessObjects Enterprise server,</p>	<ul style="list-style-type: none"> type: <code>boimg://</code> followed by the file name. For example, if the file name is "efashion_logo.gif," then type: <code>boimg://efashion_logo.gif</code> <hr/> <p>NOTE: Image files need to be installed by your administrator at the following directory on the BusinessObjects Enterprise server:</p> <hr/> <p><INSTALL DIR>\Images</p>
<p>the image file is located on another web server,</p>	<ul style="list-style-type: none"> type the URL. For example: <code>http://www.internal.businesscompany.com/images/company_logo.gif</code>

NOTE: The size of the image is defined when the image is created. You cannot modify the size of the image using Web Intelligence.

1. If you know the size of the image, you can adjust the size of the cell to the size of the image, type the width of the cell into the **Specify width** check box and type the height of the cell into the **Specify height** check box. Otherwise you can use drag-and-drop to resize the cell later.
2. Click the arrow next to the **Read Content As** list box, and select **Image URL** from the drop-down list.
3. To align the image, click the **Alignment** tab, and then select the horizontal and vertical alignments you want.

NOTE: If you want to use drag-and-drop to resize the cell later, select left align for the Horizontal alignment and select top align for the Vertical alignment.

4. If you want to add or remove a border around the image, click the **Border** tab, and then select or remove borders as appropriate.
5. Click **OK**.
6. If you want to resize the cell using drag-and-drop, select the cell, and then drag the right border and bottom border outwards as appropriate.

To select an image to display on the background of a report

1. With a Web Intelligence document open, right-click an empty area of the report you want to format.
The background of the selected report is highlighted gray.
The contextual menu appears.
Depending the area you selected, the options may be slightly different.
2. Select **Format Report** or **Format > Report**.
The **Format Report** dialog box appears.
3. Click the **Appearance** tab.
4. In the **Pattern** section, select **Image (URL)**.
5. In the **Image (URL)** text box, type the file name or URL for the image file.
The following table will help you specify the file name:

If...	then...
the image file has been installed by your administrator in the images directory on the BusinessObjects Enterprise server,	type: boimg:// followed by the file name. For example, if the file name is "efashion_logo.gif," then type: boimg://efashion_logo.gif <hr/> NOTE: Image files need to installed by your administrator at the following directory on the BusinessObjects Enterprise server: <hr/> <INSTALL DIR>\Images
the image file is located on another web server,	type the URL. For example: http://www.internal.businesscompany.com/images/compan y_logo.gif

NOTE: The size of the image is defined when the image is created. You cannot modify the size of the image using Web Intelligence.

Click the arrow to the right of the **Display** drop-down list box, and then select how you want the image to be displayed:

If you want to...	then select...
display the image once at the top left of the report, section, table, or cell,	Normal
stretch the image over the entire report area, NOTE: this option is only applied when you view or save the report as a PDF file. (See "To save a Web Intelligence document as a PDF file" on page 250.)	Stretch (PDF only)
repeat the image vertically and horizontally,	Tile
repeat the image horizontally across,	Horizontal tile
repeat the image vertically downward,	Vertical tile

1. If you selected **Normal** as the image display format, you can specify how you want the image to be vertically and horizontally aligned by clicking the arrows in the list boxes next to **Position** and selecting the appropriate vertical and horizontal position.
2. Click **OK**.

Web Intelligence applies the image you selected to the report background.

Inserting and formatting hyperlinks

You can include hyperlinks to web pages on your corporate intranet, extranet or the world wide web.

This section tells you how to:

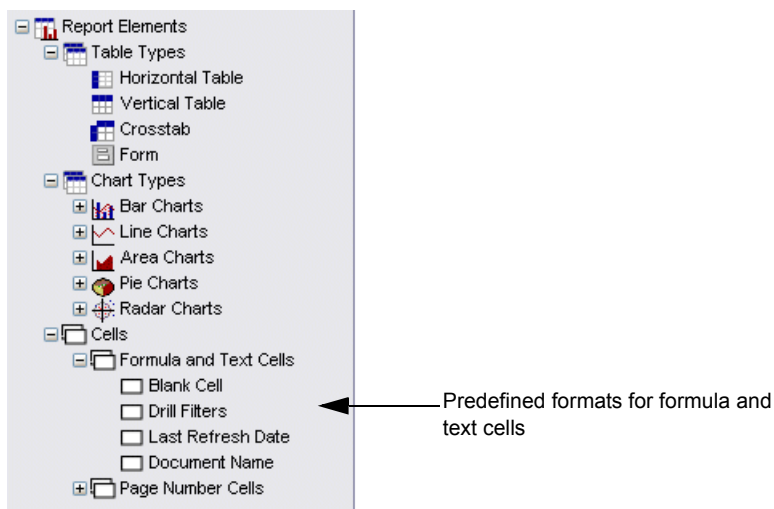
- insert a hyperlink
- select visited and unvisited hyperlink colors

To insert a hyperlink

1. Verify that the Document Properties pane is displayed to the left of the selected report. To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
The categories of chart, table, and cell types appear.
3. If the **Cells** category is not visible, click the **+** next to **Report Elements**.
4. Click the **+** next to **Cells**.

- Click the **+** next to **Formula and Text Cells**.

The available cell formats are listed here.



- Select the **Blank Cell** format and drag it onto the area of the report page where you want to display the report title.
The blank cell appears on the report.
- Right-click the blank cell, then select **Format > Cell**.
The **Format Cells** dialog box appears.
- In the **Name** text box, type the hyperlink you want.

NOTE: You must *not* include spaces in the URL or file path.

The following table lists the supported URL types:

To insert this link...	type this at the start of the URL...
Worldwide Web	http://www.
Web server	http://
Secured web server	https://
Email	mailto://
File	file://
File Transport Protocol	ftp://
Connect with Telnet	telnet://
Access to a news group	news://
Network News Transfer Protocol	nnntp://

- Select the **Read contents as** option, and then click the arrow next to the drop-down list and select **Hyperlink** from the list.
- Click **OK**.

Web Intelligence inserts the hyperlink into the cell on the report.

If you want to select visited and unvisited colors for the hyperlink, refer to ["To format visited and unvisited colors on a hyperlink"](#) on page 100.

To format visited and unvisited colors on a hyperlink

1. Right-click a blank area on the report that contains the hyperlink.
To see how to insert a hyperlink, refer to ["To insert a hyperlink"](#) on page 98.
2. On the contextual menu, select **Format Report**.
The **Format Report** dialog box appears.
3. Click the **Appearance** tab.
4. In the **Hyperlink color** section, click the arrows next to **Visited** and **Unvisited**, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.
5. Click **OK**.
Web Intelligence applies the color settings you selected to the hyperlink on the report.

Inserting HTML

Web Intelligence can treat the contents of a cell as HTML. You can include any HTML (for example, HTML formatting tags or variables) that you can include in a normal web page.

To insert HTML in a cell

1. If you want to include HTML in a blank cell instead of in a table cell, go to ["To insert a hyperlink"](#) on page 98 and follow [steps 1 to 7](#).
2. Right-click the cell, then select **Format > Cell** from the contextual menu.
The **Format Cells** dialog box appears.
3. Select the **General** tab.
4. Click **Read Content As** and select **HTML** from the drop-down list.
5. Display the **Formula** bar by selecting **View** from the menu, then selecting **Toolbars > Formula**.
6. Type the HTML you want to include in the cell, into the **Formula** bar and click the **Parse** button.

Web Intelligence displays the result in the cell if the HTML is valid.

Adding tables and cells to reports

Overview

When you create a new document, Web Intelligence generates a new report with a vertical table and standard formatting. This initial table includes all of the data in the query behind the document. You can insert more tables onto the same report or onto new reports within the same document.

This chapter tells you:

- what table types are available
- how to insert tables and free standing cells
- how to transform tables to different table types
- how to include table headers and footers
- how to add and remove rows and columns
- how to move and swap rows and columns
- how to modify the data included in tables and cells
- how to remove tables and cells from reports

For information on formatting tables, see ["Formatting tables and cells"](#) on page 111.

Available table types

Web Intelligence allows you to include four types of tables in your reports.

Vertical table

Vertical tables display header cells at the top of the table and the corresponding data in columns. By default, the header cells display the names of the dimensions, details, and measures included in the table. The body cells display the corresponding values.

Lines	Sales revenue	Margin
Accessories	\$9,914,546	\$3,809,135
City Skirts	\$347,775	\$132,302
City Trousers	\$284,734	\$104,346
Dresses	\$2,915,620	\$1,173,881
Jackets	\$677,307	\$286,130
Leather	\$187,413	\$70,599
Outerwear	\$1,183,083	\$474,302
Overcoats	\$436,258	\$185,522
Shirt Waist	\$4,018,220	\$1,616,218
Sweaters	\$2,839,035	\$1,000,673
Sweat-T-Shirts	\$12,679,893	\$5,406,317
Trousers	\$903,320	\$327,515

Horizontal table

Horizontal tables display header cells at the left of the table and the corresponding data in rows. By default, the header cells display the names of the dimensions, details, and measures included in the table. The body cells display the corresponding values.

Fiscal Period	FY01	FY02	FY03
Sales revenue	\$8,095,814	\$13,232,246	\$15,059,143
Margin	\$3,731,971	\$5,187,886	\$5,667,084

Crosstab

Crosstabs display values for dimensions across the top axis (columns) and on the left axis (rows).

	Q1	Q2	Q3	Q4
California	\$1,899,680	\$1,760,148	\$1,930,517	\$1,889,225
Colorado	\$525,682	\$500,076	\$510,777	\$523,740
DC	\$766,822	\$706,447	\$692,258	\$796,423
Florida	\$515,688	\$489,998	\$387,810	\$485,663
Illinois	\$846,408	\$850,905	\$610,765	\$714,890

You can include more than two dimensions in crosstab. You are not restricted to one dimension for the columns and one dimension for the rows. For example, the top axis (columns) might split the data by time period (for example Quarter) *and* location (for example State).

	Q1 City Skirts	Q1 City Trousers	Q2 City Skirts	Q2 City Trousers	Q3 City Skirts	Q3 City Trousers	Q4 City Skirts	Q4 City Trousers
California	\$7,796	\$8,496	\$9,075	\$1,248	\$24,377	\$11,924	\$33,685	\$26,517
Colorado	\$726	\$2,270	\$2,375	\$857	\$6,421	\$2,381	\$8,015	\$7,468
DC	\$2,668	\$4,026	\$3,564	\$1,121	\$9,788	\$5,338	\$8,326	\$10,448
Florida	\$1,765	\$1,737	\$2,735		\$4,927	\$2,511	\$7,377	\$9,563
Illinois	\$688	\$2,139	\$2,822	\$459	\$5,562	\$5,305	\$7,748	\$12,987
Massachusetts	\$1,194	\$532	\$2,373		\$5,752	\$-185	\$2,134	\$7,565
New York	\$10,626	\$14,203	\$17,241	\$1,769	\$23,762	\$18,689	\$28,564	\$41,324
Texas	\$10,612	\$12,604	\$22,272	\$1,663	\$37,119	\$20,239	\$35,898	\$49,539

Form

A form displays each row of data in free form format. Forms are useful in your report if you want to display detailed information per customer, product, or partner. For example, a form is a useful way of displaying individual customer records with information such as the

customer account, name, address, and so on. Forms are also useful for formatting address labels for envelopes.

Arai	
Phone Number	3478 4597
Address	941 Toyota Ave
Region	East Japan
Country of origin	Japan
Invoice Date	4/13/98
Revenue	\$8,036

Baker	
Phone Number	(312) 555 7040
Address	2890 Grant Avenue
Region	Mid West
Country of origin	US
Invoice Date	3/20/98
Revenue	\$9,536
Invoice Date	3/21/98
Revenue	\$23,540

Note: When you create a new document and run the query the first time to display the results, Web Intelligence generates a report that includes all of the results in a vertical table.

Inserting tables and free standing cells

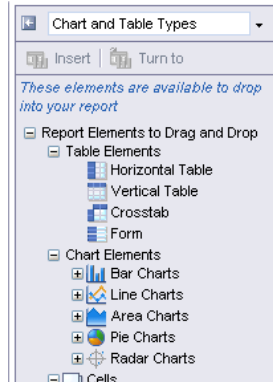
When you create a new document and run the query the first time to display the results, Web Intelligence generates a report that includes all of the results in a vertical table. You can modify how the table is organized, remove or add data, change the table type to display the results differently or insert other tables. You can also insert free standing cells to display results in a single cell.

Note: For information on adding free standing cells that include a predefined formula to display report information, such as page numbers, the document name, the last date the data in the reports was refreshed, or filters applied to reports during a drill session, see ["Including cells with predefined formulas"](#) on page 91.

To insert a table

1. Make sure that the **Document Properties** pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Select **Chart and Table Types** from the drop down list.

The Left panel now displays all the types of tables, charts and free standing cells that you can add to the report.

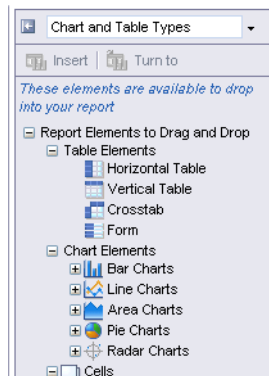


3. Select the table type that you want to add to the report in the Left panel and drag the table onto the report.
4. Right-click the table in the report, select **Insert** from the menu, then select **New column** or **New row** to add rows or columns to the table.
5. Select **Available Objects** from the drop-down list at the top of the left panel.
6. Drag the object that you want to associate with a column to the column in the report table.
The column is populated with the data from the report object.
7. Continue dragging objects to table columns until you have associated objects with all columns.

To insert a free standing cell

1. Make sure that the **Document Properties** pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Select **Chart and Table Types** from the drop down list.

3. The Left panel now displays all the types of tables, charts and free standing cells that you can add to the report.



4. Open the free standing Cells item in the report template hierarchy to display the types of free standing cell you can add.
5. Drag the type of free standing cell you want to add to the report.

If you choose **Blank Cell**, the cell remains blank.

If you choose any other type of cell, the cell is populated based on the type of information that the cell displays. For example, if you choose **Last Refresh Date**, the cell contains the formula `LastExecutionDate()` which populates it with the date the report was last refreshed.

For more details about the type of cells you can include in a report, see ["Including cells with predefined formulas"](#) on page 91.

Transforming tables to different table types

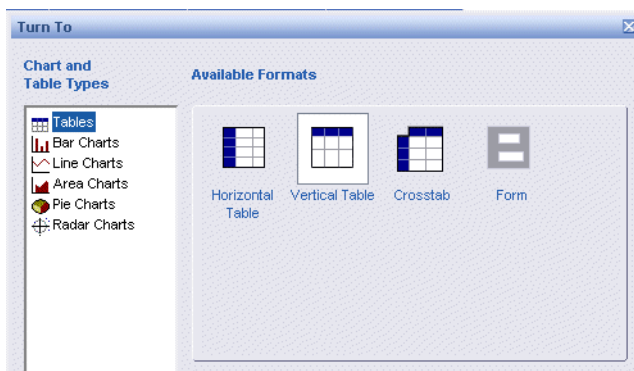
There are two ways to change the type of table for a table already displayed on a report:

- using Turn To
- dragging a different table type onto a table

To modify a table using Turn To

1. Right-click inside the table and select **Turn table to...** from the menu.

The **Turn To** dialog box appears.



2. Make sure that **Tables** is selected in the left pane.
3. Select the type of table to which you want to change the current table in the **Available Formats** area on the right.
4. Click **OK**.

Web Intelligence changes the table to the type you selected.

To apply a different table type using drag-and-drop

1. Make sure that the **Document Properties** pane is displayed to the left of the selected report.
To display the **Document Properties** pane, click the **Show left pane** arrow at the top left of the report.
2. Select **Chart and Table Types** from the drop down list at the top of the Left panel.
3. Select the table type to which you want to change the existing table and drag it over the existing table.

Web Intelligence changes the table to the type you selected.

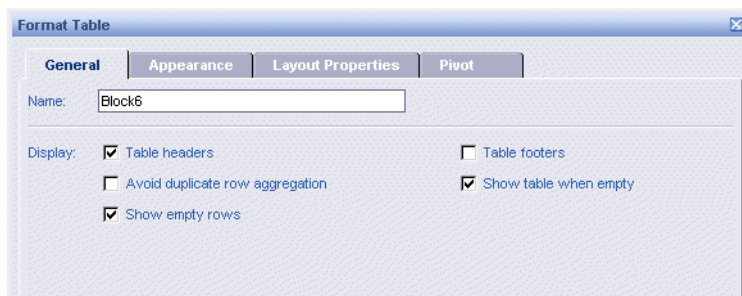
Including table headers and footers

For a description of the different table types and how they display headers and footers, see "[Available table types](#)" on page 101.

To show or hide a table header or footer

1. Right-click inside the table and select **Format** from the menu, then select **Table**.
The **Format Table** dialog box appears.

2. Select the **General** tab on the Format Table dialog box.



3. Check/uncheck **Table headers** to display/hide table headers.
4. Check/uncheck **Table footers** to display/hide table footers.

Note: If the table is a crosstab, you have the option to hide either or both of the vertical (left) and horizontal (top) headers. In this case the options **Left header** and **Top header** appear in place of **Table headers**.

Adding and removing rows and columns

After you have created a table you can modify it by changing the rows and columns.

To add a row to a table

1. Select a row in the table and right-click.
2. Select **Insert** from the menu, select **New Row**, then select **Above** or **Below**, depending on whether you want to insert the row above or below the selected row.

To add a column to a table

1. Select a column in the table and right-click.
2. Select **Insert** from the menu, select **New Column**, then select **Left** or **Right**, depending on whether you want to insert the column to the left or right of the selected column.

To remove a row from a table

1. Select a cell in the row and right-click.
2. Select **Remove** from the menu, then select **Row**.

To remove a column from a table

1. Select the column and right-click.
2. Select **Remove** from the menu, then select **Column**.

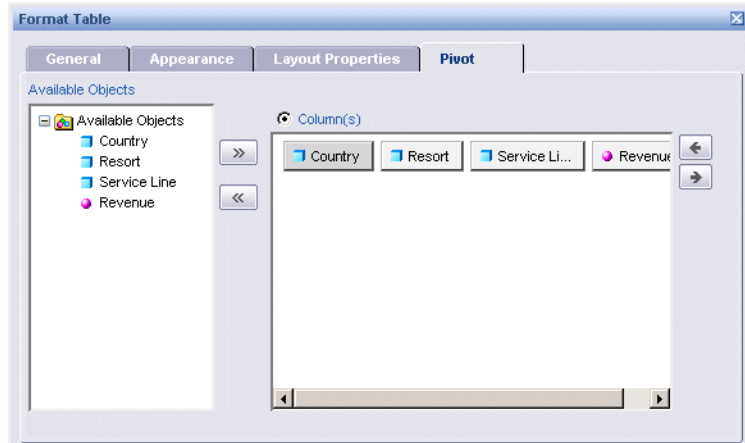
Moving and swapping rows and columns

To reorganize how information is displayed on tables, you can move or swap the table rows and columns.

You can also swap the axes on crosstabs to gain a different perspective on results.

To move columns in a table

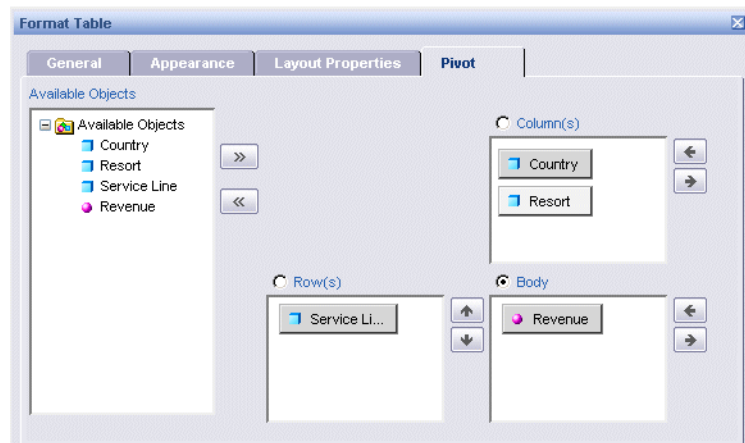
1. Right-click in the table, select **Format** from the menu, then select **Table**.
The Format Table dialog box appears.
2. Select the **Pivot** tab.



3. Select objects in the **Available Objects** area, and click >> to add them to the table.
4. Select objects in the **Column(s)** area and click << to remove them from the table.
5. Drag objects in the **Column(s)** area to set the order of columns in the table.
6. Click **OK**.

To move columns in a crosstab

1. Right-click in the crosstab, select **Format** from the menu, then select **Table**.
The **Format Table** dialog box appears.
2. Select the **Pivot** tab.



The **Pivot** tab has sections for the row(s), column(s) and body of the crosstab.

3. Select objects in the **Available Objects** area, click **Row(s)**, **Column(s)** or **Body** and click **>>** to add the objects to the rows, columns or body of the crosstab.
4. Click **Row(s)**, **Column(s)** or **Body** and click **<<** to remove objects from the rows, columns or body of the crosstab.
5. Drag objects in the **Row(s)**, **Column(s)** or **Body** area to set the object order.
6. Click **OK**.

To swap rows or columns on a crosstab

1. Select the crosstab.
2. Right-click and select **Swap axis** from the menu.

Web Intelligence swaps the rows and columns of the crosstab.

Modifying the data included in tables and cells

Once you have created a table or free standing cell you can modify the data in it by adding or removing objects, clearing the data that the table or cell contains, or deleting the table or cell.

To add objects to a table

1. Make sure that the **Document Properties** pane is displayed to the left of the selected report.

To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.

2. Select **Available Objects** from the drop down list at the top of the Left panel.
3. Select the object you want to add and drag it over to the table so that a red bar appears where you want to place the object.

Country	Revenue
France	835420
US	245

 Resort

4. Release the object.

Web Intelligence adds the object to the table.

NOTE: You can add more objects to your document by modifying the query, if you have the appropriate security profile. Refer to *Building Queries Using the Web Intelligence Query – HTML*.

To clear table or cell contents

1. Select the cell or column within a table.
2. Display the Formula bar by selecting **View** from the menu, then selecting **Toolbars**, then **Formula**.

3. Delete the cell formula in the **Formula** bar.
Web Intelligence removes the data from the cell(s).

Removing tables and cells

To remove a table

1. Select the table.
2. Right-click and select **Remove** from the menu, then select **Table**.

To remove a cell

1. Select the cell.
2. Right-click and select **Remove Cell** from the menu.

NOTE: You can only remove free standing cells. You cannot remove single cells from a table. For information on how to clear the content from cells in tables, see ["To clear table or cell contents"](#) on page 109.

Formatting tables and cells

Overview

You can personalize the formatting and choose display properties for tables and cells.

This chapter tells you how to:

- name tables and cells
- align tables and cells on report pages
- set page breaks for tables
- specify the size of cells
- format cell values – by selecting font types, styles and colors
- format numbers and dates
- format table and cell borders
- apply background colors to tables and cells
- insert images and skins on cell backgrounds
- hide empty tables – when there is no data for the tables on the database
- avoid displaying duplicate rows in tables

Naming and tables and cells

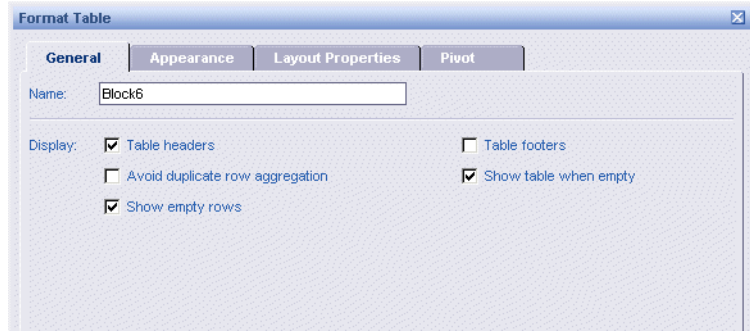
By default, Web Intelligence names each table and free-standing cell with a default name Block1, Block2, Block3, and so on. You can rename tables and cells with meaningful names to make it easier to select the formatting options for a specific table or cell or to align them in relation to other tables or charts on the report page.

Note: In all the following procedures you can select multiple cells by holding down the Ctrl key as you select.

To name tables and free standing cells

1. Select the table or free standing cell, right click, select **Format** from the menu then select **Table** from the sub menu.

2. Select the **General** tab in the **Format Table** dialog box.

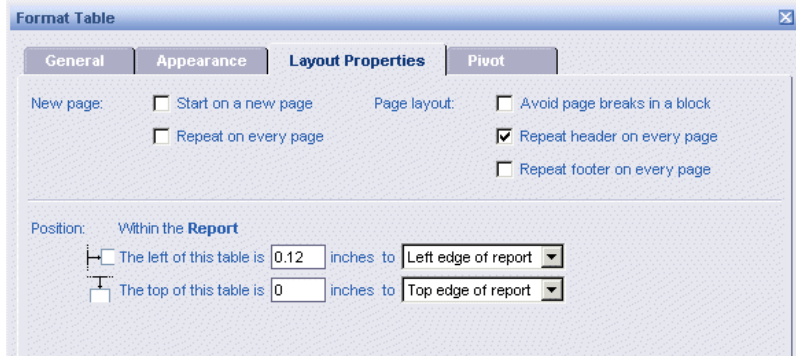


3. Type the table name in the **Name** box.

Aligning tables and cells

To align a table or cell on a report page

1. Select the table, right-click, select **Format** from the menu then select **Table** or **Cell** from the sub menu.
2. Select the **Layout Properties** tab in the **Format Table** or **Format Cell** dialog box.



3. Select the relative distances in the **Within the Report** section and choose the parts of the table that the relative distances are calculated from in the drop down lists.

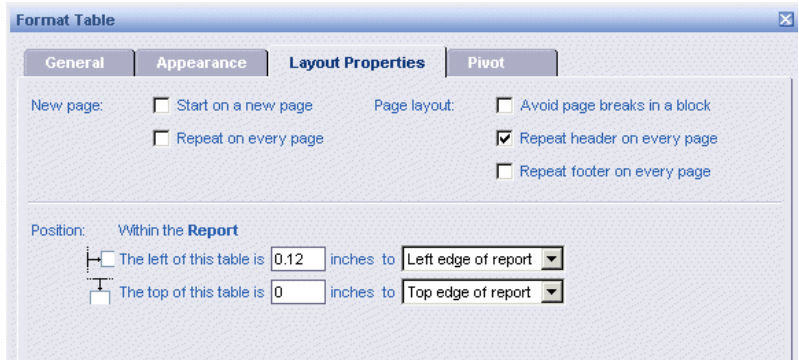
The options for relative positioning are listed in the table below:

Table part	Relative to	
Left	Left edge of report	
	Left side of	Any other block, cell or free standing cell in the document
	Right side of	Any other block, cell or free standing cell in the document
Top	Top edge of report	
	Top side of	Any other block, cell or free standing cell in the document
	Bottom side of	Any other block, cell or free standing cell in the document

Setting page breaks for tables

To avoid page breaks in a table

1. Select the table, right-click, select **Format** from the menu then select **Table** from the sub menu.
2. Select the **Layout Properties** tab in the **Format Table** dialog box.



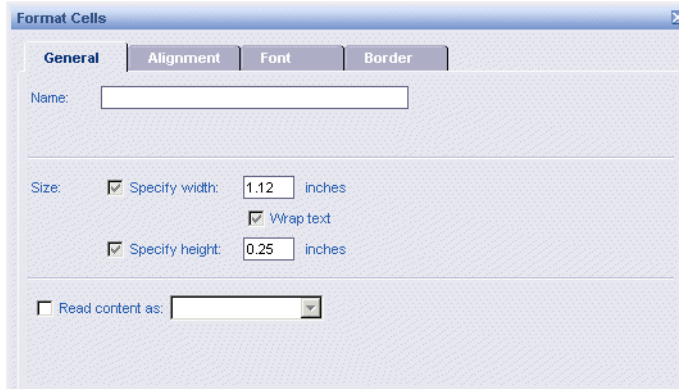
3. Check **Avoid page breaks in a block**.

Sizing cells

You can specify the exact width or height of cells.

To specify cell width and height

1. Select the cell, right click, select **Format** from the menu and then select **Cell** from the sub menu.
2. Select the **General** tab in the **Format Cells** dialog box.



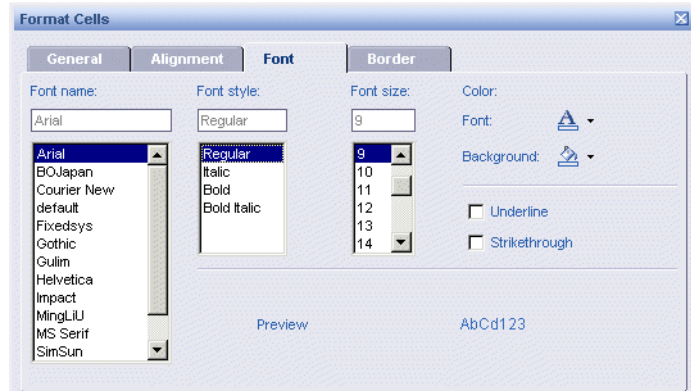
3. Check the **Specify width** check box and enter the width of the cell.
4. Check the **Specify height** check box and enter the height of the cell.

Formatting cell values

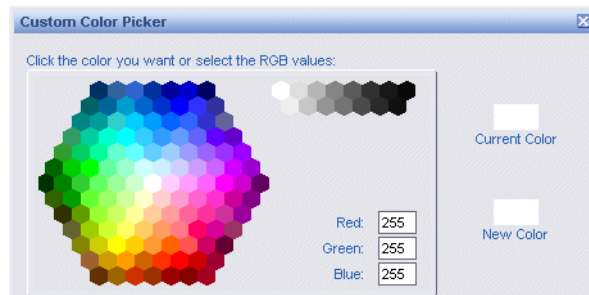
You can change the font, color, style or alignment of the display of values in cells.

To change fonts, colors, or styles applied to cell values

1. Select the cell, right-click, select **Format** from the menu then select **Cell** from the sub menu.
2. Select the **Font** tab in the **Format Cells** dialog box.



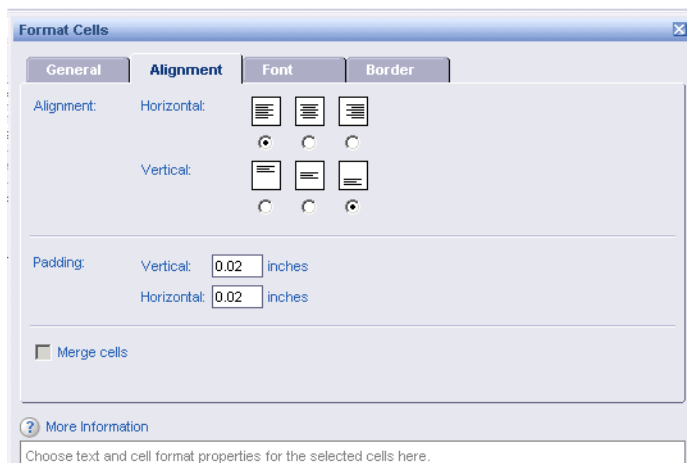
3. To change the font, select the font name from the list below the **Font name** box.
4. To change the font style, select the style from the list below the **Font style** box.
5. To select the font size, select the size from the list below the **Font size** box.
6. To define underline and/or strikethrough on the font, check the **Underline** and/or **Strikethrough** boxes.
7. To define the font color, click the down arrow beside **Font** in the **Color** section of the dialog box to display the color editor.
8. Select the color in the Color Editor or click **More colors...** to display the **Custom Color Picker**.



9. Select the color in the **Custom Color Picker** or enter the red, green and blue values of the color.

To align cell values

1. Select the cell, right click, select **Format** from the menu and then select **Cell** from the sub menu.
2. Select the **Alignment** tab in the **Format Cells** dialog box.



3. Use the radio buttons to set the horizontal format (left -justified, centered or right-justified) and the vertical format (top, middle or bottom).
4. To set the vertical and horizontal padding (the distance of the cell content from the left and top cell borders) enter the padding distances in the **Vertical** and **Horizontal** boxes.

Merging cells

You can merge cells horizontally .

To merge cells

1. Multi-select the cells or columns you want to merge by holding down Ctrl and selecting each cell/column.
2. Select **Merge cells**.

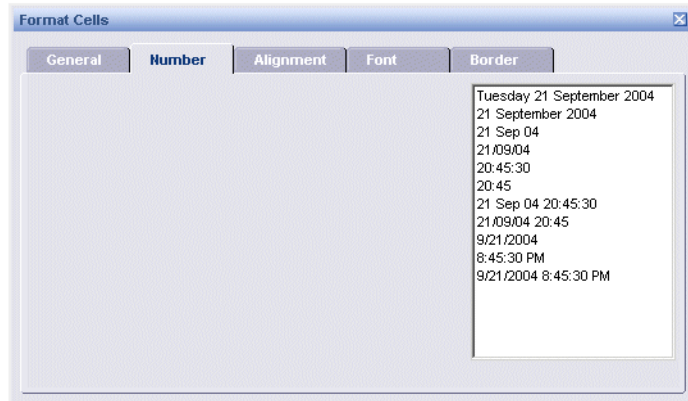
Formatting numbers and dates

Web Intelligence allows you to format numbers and dates in tables.

To format numbers and dates

1. Select the cell containing the number or date you want to format.
2. Right-click, select **Format** from the menu then select **Cell** from the sub menu.
The **Format Cells** dialog box appears.

3. Select the **Number** tab.



4. Select the format from the list of formats and click **OK**.

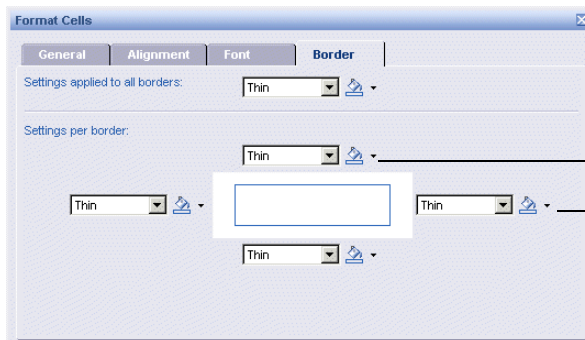
NOTE: If the cell contains a number, the list of formats contains number formats. If the cell contains a date, the list of formats contains date formats.

Formatting cell borders

You can format the style and color of cell borders.

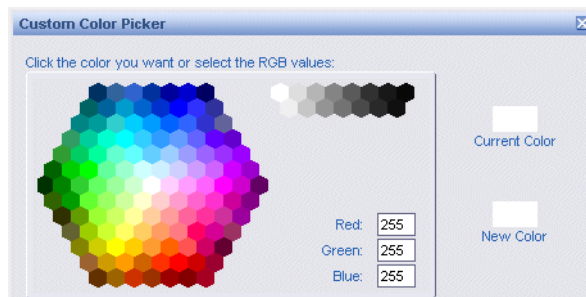
To choose a border style and color

1. Select the cell, right-click, select **Format** from the menu and then select **Cell** from the sub menu.
2. Select the **Border** tab in the **Format Cells** dialog box.



3. To set the style for all the borders of the selected cell, select the style from the **Settings applied to all borders** list.
4. To set the style for each border of the selected cell individually, select the styles from the four lists in **Settings per border**.
5. To remove borders, select **None** in the lists.

- Click the down arrow beside each drop down list to display the color editor to choose the border color.
- Select the color in the Color Editor or click **More colors...** to display the Custom Color Picker.

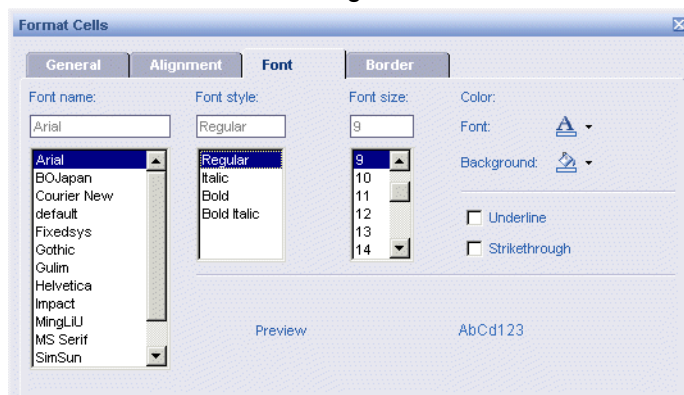


- Select the color in the **Custom Color Picker** or enter the red, green and blue values of the color.

Setting cell background color

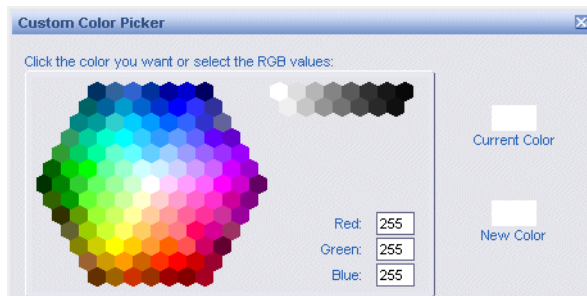
To choose a background color

- Select the cell, right-click, select **Format** from the menu and then select **Cell** from the sub menu.
- Select the **Font** tab in the **Format Cells** dialog box.



- Click the arrow next to **Background** to display the color editor.

4. Select the color in the color editor or select **More colors...** to display the Custom Color Picker. (To remove the color, select **Default** in the color editor.)



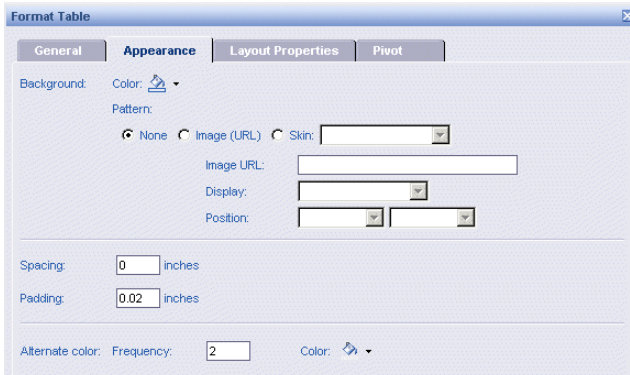
5. Select the color in the **Custom Color Picker** or enter the red, green and blue values of the color.

Formatting tables with images or skins

You can display images in a table by linking to an image file, or define a skin for the table.

To link to an image file

1. Select the table, right-click, select **Format** from the menu then select **Table** from the sub menu.
2. Select the **Appearance** tab in the **Format Table** dialog box.



3. Click **Image URL**.

4. Type the URL of the image in the **Image URL** box as described in the following table:

the image file has been installed by your administrator in the images directory on the BusinessObjects Enterprise server,	<ul style="list-style-type: none"> type: <code>boimg://</code> followed by the file name. For example, if the file name is "efashion_logo.gif," then type: <code>boimg://efashion_logo.gif</code> <hr/> <p>NOTE: Image files need to be installed by your administrator at the following directory on the BusinessObjects Enterprise server:</p> <hr/> <p><INSTALL DIR>\Images</p>
the image file is located on another web server,	<ul style="list-style-type: none"> type the URL. For example: <code>http://www.internal.businesscompany.com/images/company_logo.gif</code>

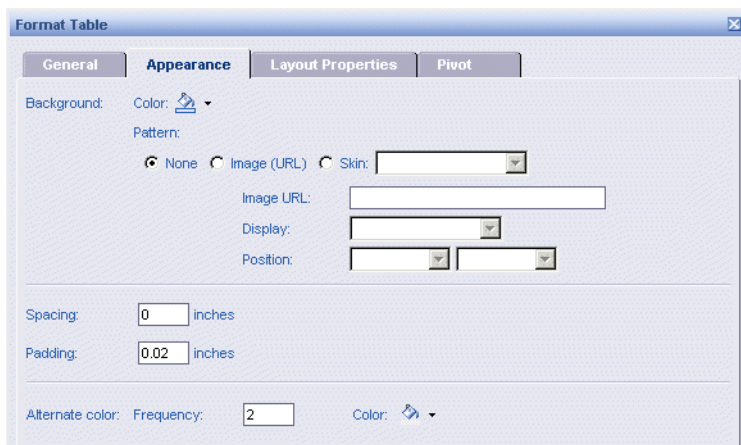
1. Click the arrow to the right of the **Display** drop-down list box, and then select how you want the image to be displayed

If you want to...	then select...
display the image once at the top left of the report, section, table, or cell,	Normal
stretch the image over the entire report area,	Stretch (PDF only)
<hr/> <p>NOTE: this option is only applied when you view or save the report as a PDF file. (See "To save a Web Intelligence document as a PDF file" on page 250.)</p> <hr/>	
repeat the image vertically and horizontally,	Tile
repeat the image horizontally across,	Horizontal tile
repeat the image vertically downward,	Vertical tile

- If you selected **Normal** as the image display format, you can specify how you want the image to be vertically and horizontally aligned by clicking the arrows in the list boxes next to **Position** and selecting the appropriate vertical and horizontal position.
- Type the image spacing and padding in the **Spacing** and **Padding** boxes.

To display a skin

1. Select the table, right-click, select **Format** from the menu and then select **Table** from the sub menu.
2. Select the **Appearance** tab in the **Format Table** dialog box.



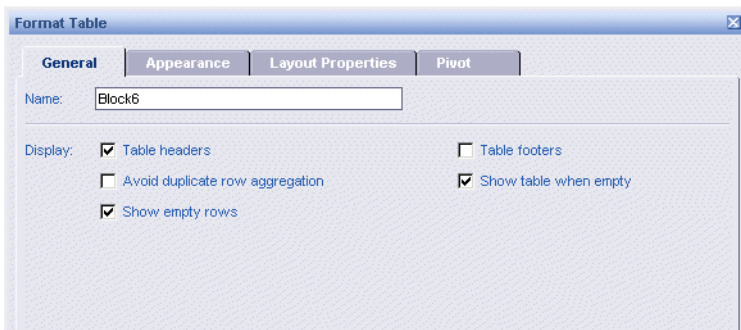
3. Click **Skin** then select the skin from the list of server skins in the drop-down list next to the **Skin** radio button.
4. Type the skin spacing and padding in the **Spacing** and **Padding** boxes.

Hiding tables when there is no data to show

You can hide table rows or columns when they contain no data; you can also hide entire tables when they contain no data.

To show or hide empty rows, columns or tables

1. Select the cell, right-click, select **Format** from the menu and then select **Table** from the sub menu.
2. Select the **General** tab on the **Format Table** dialog box.



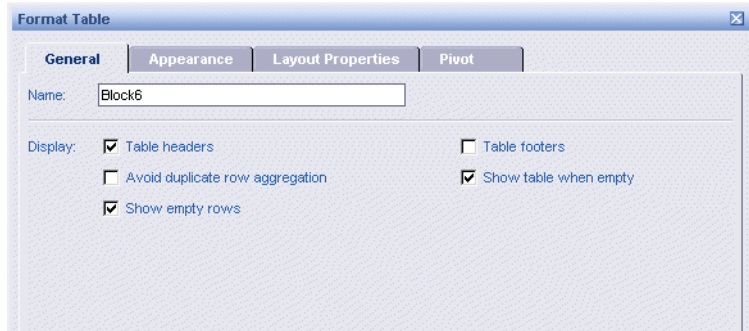
3. To hide empty rows, uncheck **Show empty rows**.
4. To hide empty columns, uncheck **Show empty columns**.
5. To hide the entire table if it is empty, uncheck **Show table when empty**.

Avoiding duplicate rows

You can set the table display so that numeric data in duplicate rows is aggregated. If you do not choose this option the duplicate rows appear in the table.

To set duplicate row aggregation

1. Select the cell, right click, select **Format** from the menu and then select **Table** from the sub menu.
2. Select the **General** tab on the **Format Table** dialog box.



3. Uncheck **Avoid duplicate row aggregation**.

Working with alerters

Alerters enable you to highlight results that meet or fail specific business targets. You can create a simple alerter to highlight particularly high or low results with a specific color or with a text comment, such as "High Performer."

Alerters are dynamic. This means that when you refresh reports with the latest data on the database, the alerters highlight the new results accordingly.

You cannot create alerters when working in Interactive mode. To do so you use the Java Report Panel. For more information on creating alerters in the Java Report Panel, see chapter "Using Alerters to Highlight Key Results" in the the *Building Reports with the Web Intelligence Java Report Panel* guide.

When in Interactive mode you can view, activate and deactivate alerters created using the Java Report Panel.

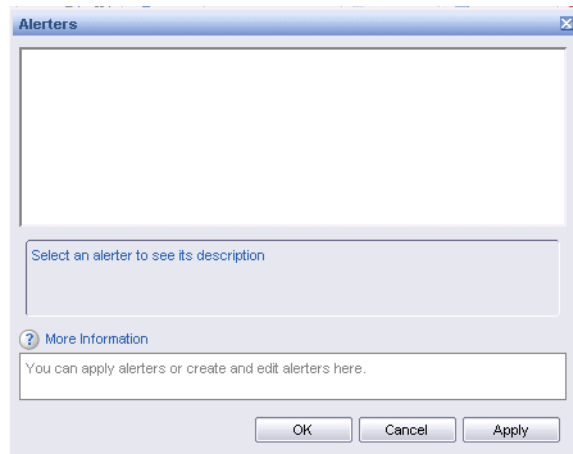
To view, activate and deactivate alerters

1. Make sure the **Report** toolbar is visible by clicking **View > Toolbars > Report**.
2. Select a column or columns a table.

NOTE: To select multiple columns, hold down the Ctrl key while selecting.

3. Click **Alerters** on the Report toolbar.

The Alerters dialog box appears.



4. Check the box next to an alerter to activate it, or uncheck the box to deactivate the alerter.

The table appearance changes according to which alerters are activated.

Adding charts to reports

Overview

This chapter explains how to add charts to Web Intelligence reports and edit the data charts present.

- [chart types available with Web Intelligence](#)
- [inserting and removing charts from reports](#)
- [transforming charts to different chart types](#)
- [modifying how data is included in charts](#)
- [duplicating and removing charts](#)

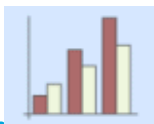
For information on formatting charts, see ["Formatting charts"](#) on page 133.

Available chart types

Web Intelligence offers standard chart formats to graphically display your business information. You can select one of five basic chart types in Web Intelligence:

- bar charts
- line charts
- area charts
- pie charts
- radar, polar, and scatter charts

Bar charts



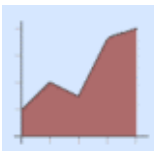
Line charts

Bar charts display data in bar form, either vertically or horizontally. Bar charts are useful if you want to compare similar groups of data; for example one time period to another. There are five types of bar charts: grouped, bar and line, stacked, percent, and 3D.



Area

Line charts connect specific data values with lines, either horizontally or vertically. Line charts are useful if you want to show trends or changes in data over time. There are five types of line charts: mixed, stacked, percent, 3D, and 3D surface.



Area charts are line charts in which the area between the lines and axis are filled in. Area charts are useful if you want to emphasize the size of the total data in a report, as opposed to the changes in the data. You may not want to use an area chart if you have a sharp contrast between specific data points. Use a line chart instead.

You can use more than one measure object on the Y-axis as long as the measures are of the same type and scale; for example, Number of Guests, and Future Guests. There are five types of area charts: absolute, stacked, percent, 3D area, and 3D surface.

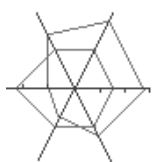
Pie charts



Pie charts display data as segments of a whole. Pie charts are useful if you want to show how each part of your report data contributes to the total.

You can only include one measure object in a pie chart. If you have several measures in your report, you should choose another chart type. There are four types of pie charts: pie, 3D pie, ring, 3D ring.

Radar, Polar, and scatter charts



In radar charts, the X- and Y-axis connect at the chart's center. Radar charts are useful if you want to look at several different factors related to one item. For example, you could use a radar chart to display revenue data for different services within a hotel. On one axis, you could display revenue for the rooms. On another you could display revenue for the restaurant, and so on.

Scatter charts are similar to line graphs, except that the data points are plotted without a line connecting them. Scatter charts are useful if you want to make a comparison between specific data points.

There are four types of radar, polar, and scatter charts: radar line, stacked radar, polar, and scatter.

Inserting charts

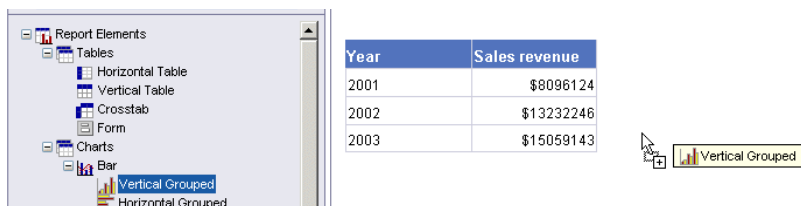
There are three ways to insert a chart into a report:

- insert a blank chart and allocate data to the axes
- duplicate a chart already on the report and then modify the data and/or format
- turn a table into a chart – if you want to retain the original table you can duplicate the table first and then turn the duplicate into a chart

To insert a blank chart and allocate data to the axes

1. Verify that the Document Properties pane is displayed to the left of the selected report. To display the Document Properties pane, click the **Show Left Pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
The categories of chart, table, and cell types appear.
3. If the **Charts** category is not visible, click the **+** next to **Report Elements**.
4. Click the **+** next to **Charts**.
The different types of chart are listed. Each type contains multiple versions with different layout and formatting properties.

- To view the formats available for the chart type, click the **+** next to the appropriate chart type.
For example, if you want to add a Bar chart to the report, click the **+** next to **Bar**.
- Select the chart format you want to add to the report, and then drag it onto a blank area of the report.



The **Format Chart** dialog box appears.

- Verify the **Pivot** tab is selected.
This tab allows you to allocate data to the chart axes.
- Select objects from the **Available Objects** list and drop them onto the Y-Axis, X-Axis, and Z-Axis panes as appropriate.

NOTE: You can only place measure objects on the Y-Axis.

- To view the data on the chart now, click **OK**.
Or
Click **Apply** and then select the **General**, **Appearance**, or **Layout Properties** tab(s) to personalize how the chart is formatted. (For information on the formatting options for charts, see ["Formatting charts"](#) on page 133.)

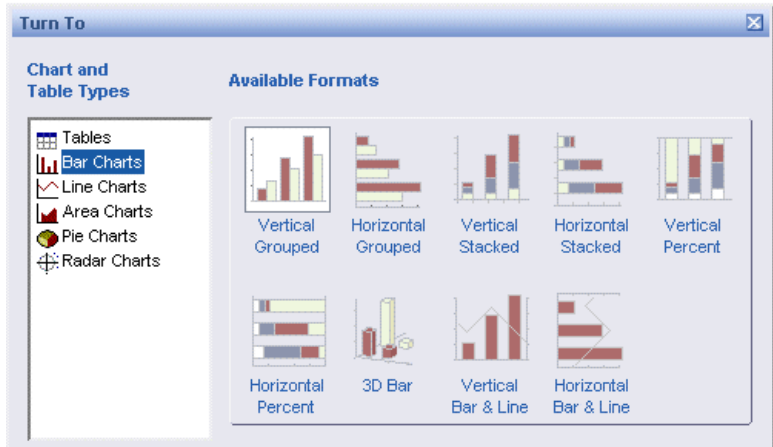
To duplicate a chart

- Select the chart you want to duplicate.
- Click **Duplicate** on the **Report** toolbar.
Or
Click the arrow next to the **Duplicate** button and then select where you want the duplicate chart to be positioned in relation to the original chart.
Web Intelligence inserts the duplicate chart.
For information on the formatting options for charts, see ["Formatting charts"](#) on page 133.

To turn a table into a chart

- If you want to keep a table in the report and add a chart that displays the same data, you can duplicate the table first by selecting the table, and then clicking **Duplicate** on the **Report** toolbar.
Or
If you want to turn the original table into a chart, go to step 2.

2. Right-click the table you want to turn into a chart.
3. Click **Turn table to...**
The **Turn To** dialog box appears.



4. Select the chart type you want to create in the left pane.
The different formats available for the selected chart type appear on the right.
5. Click the appropriate format, and then click **OK**.
Web Intelligence turns the table into a chart according to the format you selected.
You can modify how the data is allocated to the chart axes. To find out how to do this, see "[Modifying how data is allocated to charts](#)" on page 128.

Transforming charts to different chart types

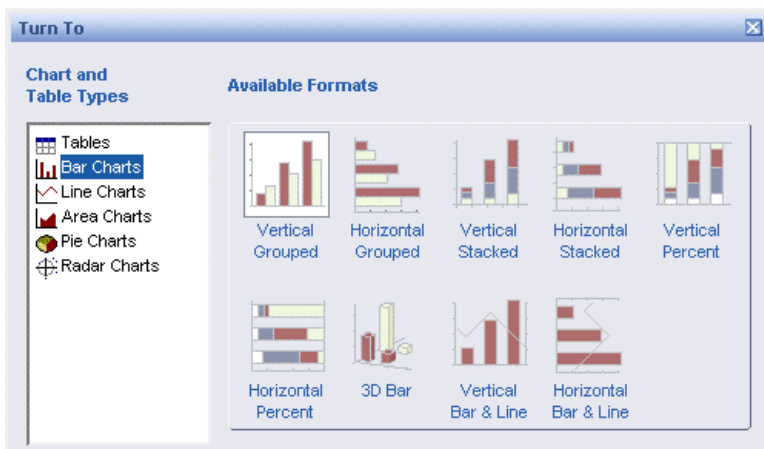
There are two ways to change the type of chart for a chart already displayed on a report:

- using Turn To
- dragging a different chart type onto a chart

To modify a chart using turn to

1. Right-click the chart you want to modify.
2. Click **Turn chart to...**

The **Turn To** dialog box appears.

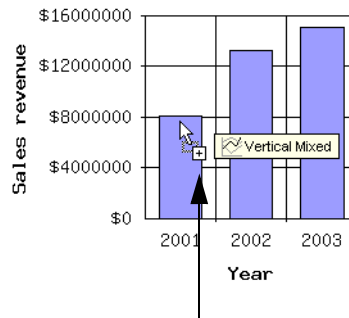
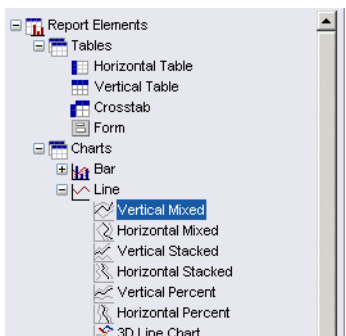


3. Select the chart type you want in the left pane.
The different formats available for the selected chart type appear on the right.
4. Click the appropriate format, and then click **OK**.
Web Intelligence modifies the chart according to the format you selected and re-allocates the data to different chart axes, if necessary.
You can modify how the data is allocated to the chart axes. To find out how to do this, see ["Modifying how data is allocated to charts"](#) on page 128.

To modify a chart type using drag-and-drop

1. Verify that the Document Properties pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show Left Pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Chart and Table Types**.
The categories of chart, table, and cell types appear.
3. If the **Charts** category is not visible, click the **+** next to **Report Elements**.
4. Click the **+** next to **Charts**.
The different types of chart are listed. Each type contains multiple versions with different layout and formatting properties.
5. To view the formats available for the chart type, click the **+** next to the appropriate chart type.
For example, if you want to change a chart on the report into a Bar chart, click the **+** next to **Bar**.

6. Select the chart format you want, and then drag it onto the chart you want to modify.



Dragging a Line chart type onto a Bar chart

Web Intelligence transforms the chart on the report to the new chart type you selected and re-allocates the data to different chart axes, if necessary.

You can modify how the data is allocated to the chart axes. To find out how to do this, see ["Modifying how data is allocated to charts"](#) on page 128.

Modifying how data is allocated to charts

You can allocate different data to charts from among the data available in reports and swap the axes on 3D charts to view results from a different perspective. This section tells you how to:

- move, add, or remove data on charts
- swap data on 3D Bar chart axes

To move, add, or remove data on charts

1. Right-click the chart you want to modify.
2. Select **Format > Chart**.

The **Format Chart** dialog box appears.

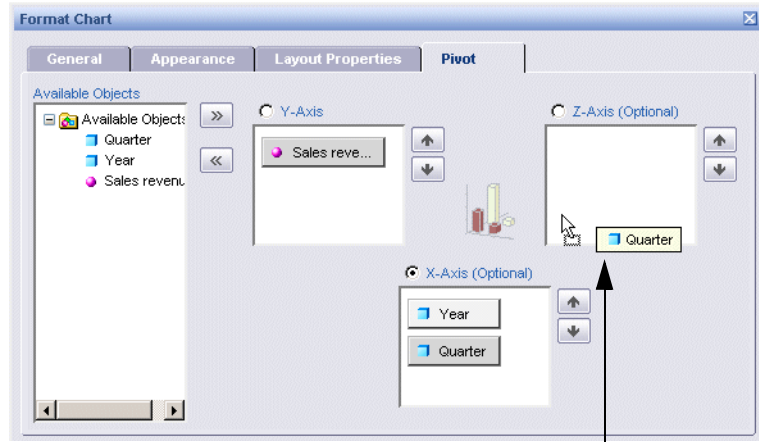
3. Click the **Pivot** tab.
4. To add objects to the chart, select objects from the **Available Objects** list and drop them onto the Y-Axis, X-Axis, and Z-Axis panes as appropriate.

Or

To move objects from one axis to another, select the object in the appropriate axis pane, and then drag the object to the pane for the axis where you want to move it.

Or

To remove objects from the chart, select the object in the appropriate axis pane, and then drop the object onto the **Available Objects** list.



Dragging [Quarter] from the X-Axis onto the Z-Axis

NOTE: You can only place measure objects on the Y-Axis.

5. Click **OK**.

Web Intelligence displays the chart with the data allocated to the chart axes as you specified.

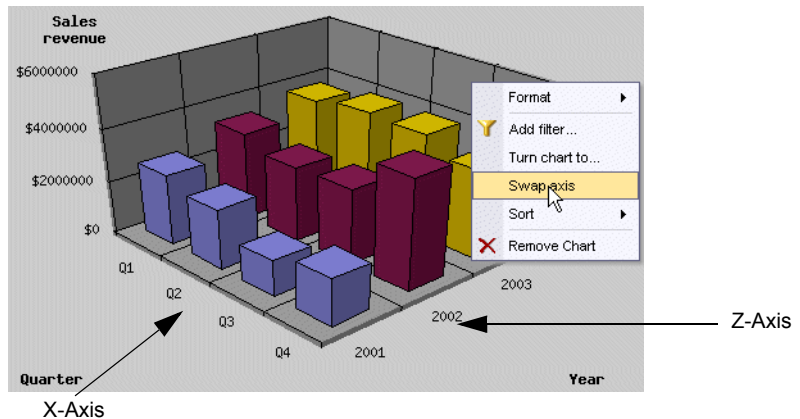
NOTE: If you want to add data to a chart that isn't already included in the data definition of the document, you can add more data to your document by modifying the query, if you have the appropriate security profile. For information on editing queries, see the *Building Queries Using Web Intelligence Query – HTML* guide.

To swap data on 3D chart axes

1. Right-click the chart you want to modify.

NOTE: You can only swap axes on 3D Bar charts.

The contextual menu appears.



2. Select Swap axes.

The data on the X-Axis is moved to the Z-Axis and the data on the Z-Axis is moved to the X-Axis.

Duplicating and removing charts

To avoid building a chart from scratch, you can duplicate an existing chart on a report and then modify its formatting and data content, as necessary. You can remove charts from reports at any time.

To duplicate a chart

1. Select the chart you want to duplicate.
2. Click **Duplicate** on the **Report** toolbar.

Or

Click the arrow next to **Duplicate**, and then select where you want to position the duplicate chart.

Web Intelligence displays the duplicate chart on the report.

You can modify how the data is allocated to the chart axes. To find out how to do this, see "[Modifying how data is allocated to charts](#)" on page 128.

For information on the formatting options for charts, see "[Formatting charts](#)" on page 133.

To remove a chart from a report

1. Right-click the chart you want to remove.
The contextual menu appears.
2. Select **Remove Chart**.

Web Intelligence removes the selected chart from the report.

Formatting charts

Overview

You can personalize the formatting settings applied to charts. This chapter tells you about:

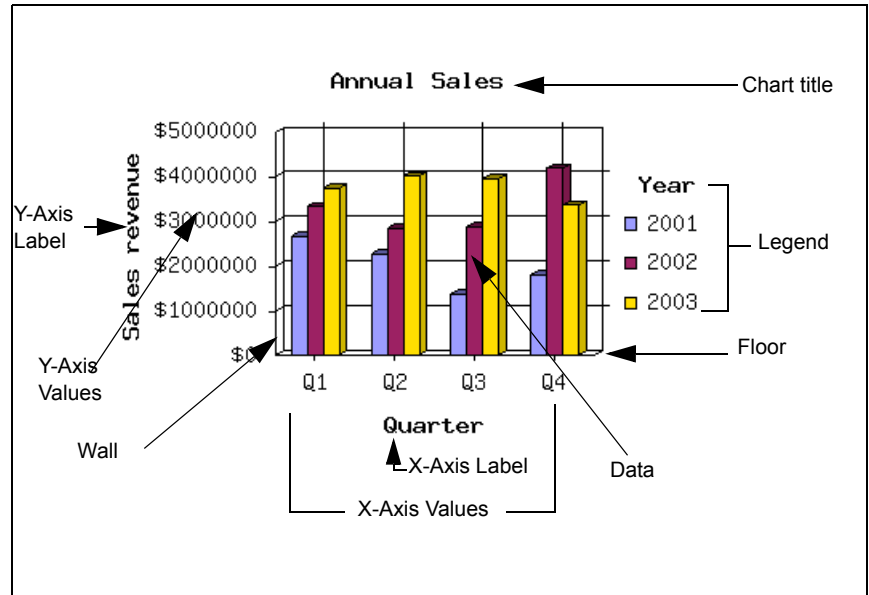
- the formatting options available per chart type
- resizing charts
- positioning charts on report pages
- setting page breaks on charts
- adding and formatting chart titles
- displaying and formatting legends
- applying a 2D or 3D look
- formatting axis labels
- formatting axis values, grids, and scales
- formatting how data appears on the chart body
- formatting chart borders
- formatting chart backgrounds, floors, and walls
- applying or avoiding duplicate row aggregation

Formatting options per chart type

This section of this chapter includes illustrations that will help you identify the different areas of charts you can format. Since not all chart types include all of the possible axes or legends, this section provides examples of several different chart types.

About 2D charts

For example, 2D charts include an optional axis legend that lists the values displayed on the bars or lines.

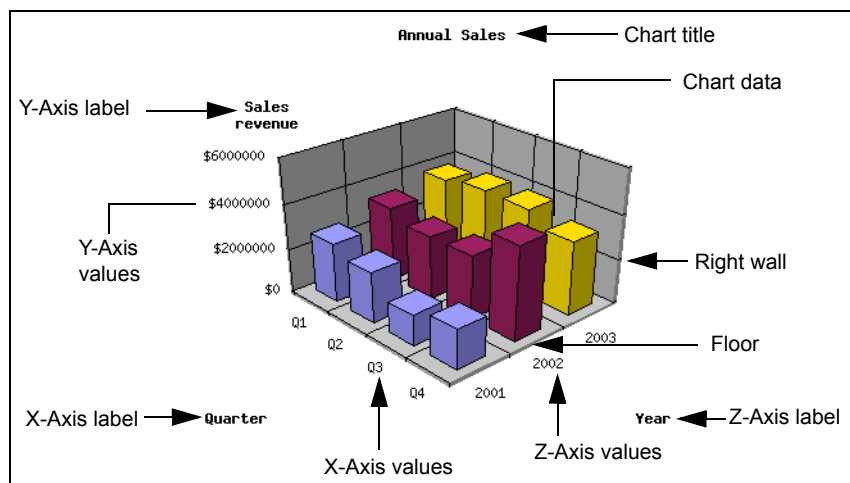


In this example, a 2D bar chart includes the optional Z-Axis. Including data on the Z-Axis enables you to show an additional break down of the results displayed on the chart bars. The [Sales revenue] measure is on the Y-Axis, the [Year] dimension is on the X-Axis, and the [Quarter] dimension is on the Z-Axis.

About 3D charts

3D bar charts do not include an axis legend. You can clearly see what information is displayed on the chart bars by looking at the axis labels.

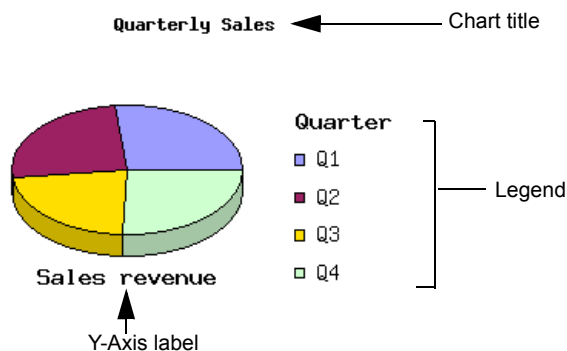
The following example shows a 3D bar chart.



In this example, the chart bars display sales revenue per quarter, per year. The [Sales revenue] measure is on the Y-Axis, the [Quarter] dimension is on the X-Axis, and the [Year] dimension is on the Z-Axis.

About pie charts

Pie charts have a single axis displayed on the body of the pie. This is the Y-Axis. Each segment of the pie chart displays a value for the measure on the Y-Axis. The pie chart legend indicates the dimension on the X-Axis.



In this example, the 3D pie chart shows sales revenue per year. The measure on the Y-Axis is [Sales revenue] and the dimension displayed on the X-Axis is [Year]. Like 2D pie charts, 3D pie charts display measures for a single dimension. The graphical design of 3D pie charts, however, gives a 3D appearance.

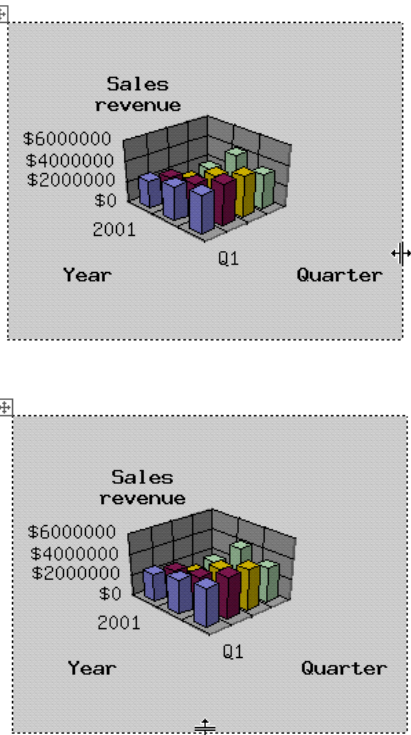
Resizing charts

When you insert a chart onto a report, the size of the chart is minimal. You can resize the chart to make results display more clearly, according to the amount of information the chart contains.

To resize a chart

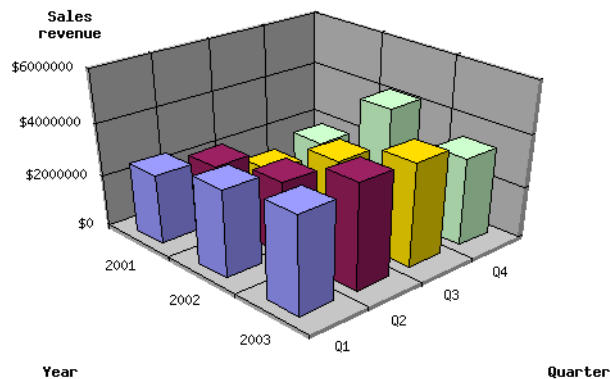
1. Select the chart, and then dragging the borders outwards.

- Drag the vertical borders to the right or the left to change the chart width.
- Drag the horizontal borders up or down to change the chart height.



The top diagram shows a 3D bar chart titled 'Sales revenue' with a vertical double-headed arrow on the right side, indicating that the chart's width can be adjusted. The bottom diagram shows the same chart with a horizontal double-headed arrow at the bottom, indicating that the chart's height can be adjusted. Both charts have a vertical axis labeled 'Sales revenue' with values from \$0 to \$6,000,000, and a horizontal axis labeled 'Year' with values '2001' and 'Q1'.

Web Intelligence resizes the chart according to your modifications.



Positioning charts on report pages

You can specify where you want charts to appear on the report page.

Note: By default, Web Intelligence names each chart with a default name Block1, Block2, Block3, and so on. You can rename charts with meaningful names to make it easier to select the formatting options for a specific chart or to align charts in relation to other tables or charts on the report page.

This section tells you how to:

- name a chart
- position a chart on the report page

To name a chart

1. Right-click the chart where you want to name.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **General** tab.
4. In the **Name** text box, type the name you want to assign to the chart.
For example, "Pie chart – sales regions"
5. Click **OK**.

Web Intelligence assigns the name you typed to the chart.

To view the chart name, view the **Document Structure and Filters** overview. To find out how to do this, see "[Viewing the document overview](#)" on page 41.

To position a chart on a report page

1. Right-click the chart for which you want to specify the position.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **Page Layout** tab.
4. In the **Position** section, specify where you want to position the left edge and the top edge of the chart in relation to left edge and top edge of the report page.
5. Click **OK**.

Web Intelligence positions the chart on the report page, as you specified.

Setting page breaks for charts

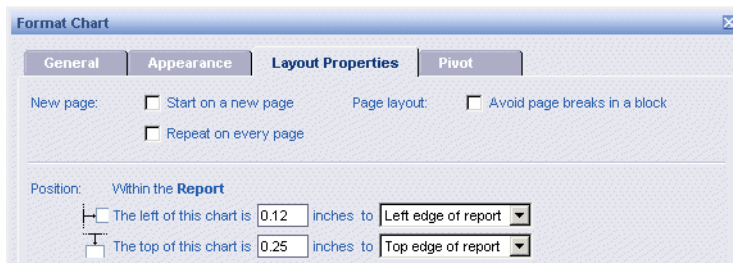
When your report contains several pages, you can choose to avoid page breaks in charts. This enables you to keep charts in their entirety on the same page of a report. You can also repeat charts on each page of a report. This is useful on long reports, where the chart is necessary to make a comparison with other report data.

To avoid page breaks in a chart and repeat charts on report pages

1. Right-click the chart you want to modify.
2. Select **Format > Chart**.

The **Format Chart** dialog box appears.

3. Click the **Page Layout** tab.



4. Select the appropriate page layout options:

Insert a page break so that the chart appears at the top of a new page,	Start on a new page
Display the chart on every page of the report,	Repeat on every page
Prevent page breaks from occurring on the chart, wherever possible,	Avoid page breaks in a block

1. Click **OK**.

Web Intelligence applies the page layout properties to the chart, as you specified.

Adding and formatting chart titles

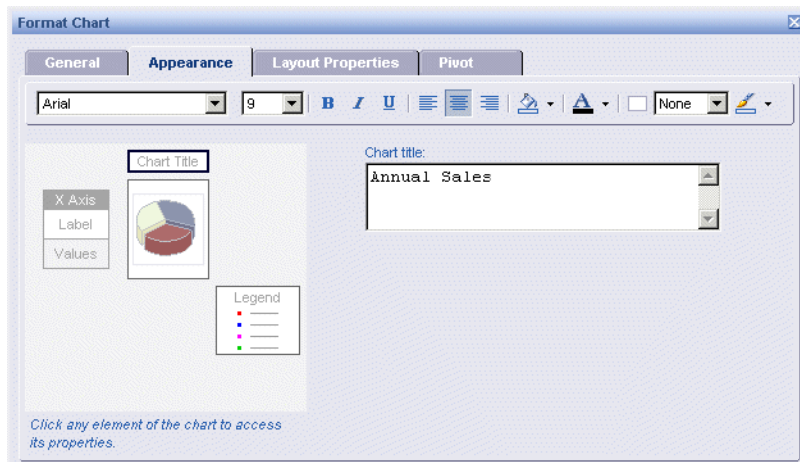
You can add titles to charts to identify the information they present. This section tells you how to:

- insert a title for a chart
- format a chart title

To insert a title for a chart

1. Right-click the chart where you want to add a title.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. On the **General** tab, select **Show chart title**.
4. Click the **Appearance** tab.
5. Click **Chart Title** on the preview pane on the left.

- In the **Chart Title** pane on the right, type the title you want to give to the chart.



- To view the title on the report, click **OK**.
Or
If you want to format the title now, go to step 4, below.

To format a chart title

- Right-click the chart with the title you want to format.
To see how to insert a title for a chart, refer to ["To insert a title for a chart"](#) on page 138.
- Select **Format > Chart**.
The **Format Chart** dialog box appears.
- Click the **Appearance** tab, and then click **Chart Title** on the preview pane on the left.
- Use the options in the formatting toolbar on the **Appearance** tab to format the text, cell background, and cell borders of the chart title.
- Click **OK**.
Web Intelligence applies your formatting changes to the chart title.

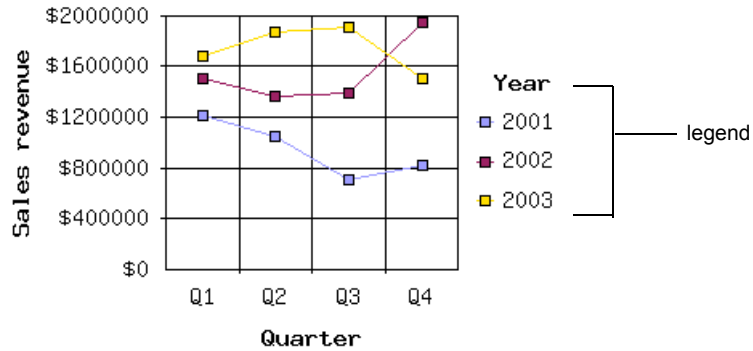
Displaying and formatting legends for charts

You can insert a legend for the following chart types:

- 2D bar charts, 2D line charts, and 2D bar and line charts
- pie and doughnut charts
- radar, polar, and scatter charts

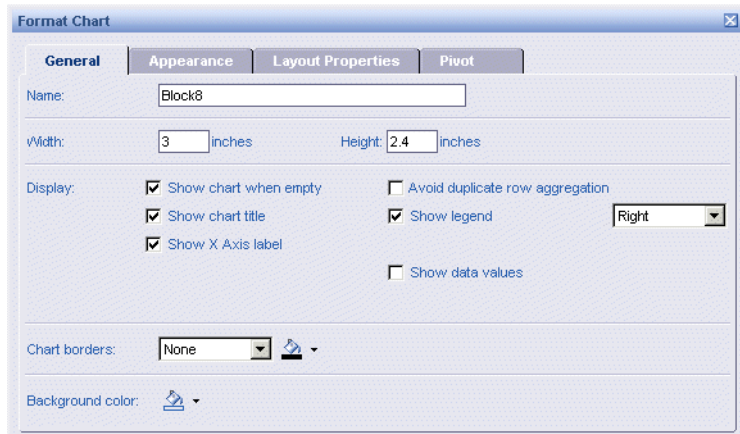
Note: Axis legends are not available for 3D Bar charts.

You can set Web Intelligence to display the legend to either the left, right, or bottom of the chart. You can also hide the legend.



To show or hide a legend and position the legend next to the chart

1. Right-click the chart you want to modify.
2. Select *Format > Chart*.
The **Format Chart** dialog box appears.
3. Click the **General** tab.
4. To display a legend, click **Show legend**, and then click the arrow next to the drop-down list box and select where you want to position the legend (**Left**, **Right**, or **Bottom**) in relation to the chart.



Or

If you don't want to include a legend, verify that **Show legend** is **not** selected.

5. If you want to format the appearance of the legend, refer to ["To set formatting properties for a legend"](#) on page 141, below.

6. Click **OK**.

Web Intelligence shows or hides the legend for the chart, as you specified.

To set formatting properties for a legend

1. Right-click the chart you want to modify.

Verify the chart already has a legend displayed. If you need to insert a legend first, refer to ["To show or hide a legend and position the legend next to the chart"](#) on page 140.

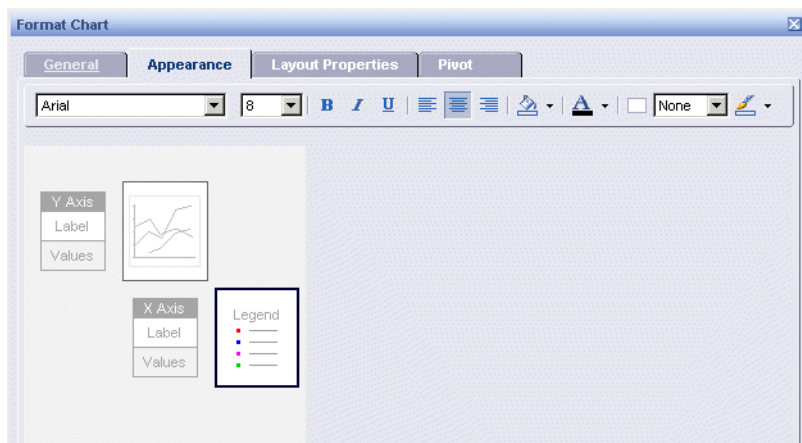
2. Select **Format > Chart**.

The **Format Chart** dialog box appears.

3. Click the **Appearance** tab.

4. On the chart preview pane, click **Legend**.

The formatting options for the legend appear.



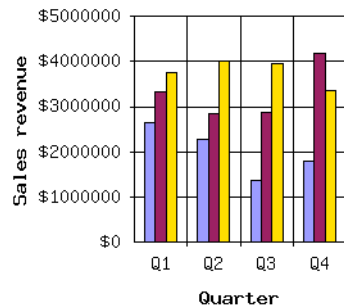
5. Select the appropriate settings for the legend text (font style, size, and color), for the legend background (color), and for the legend borders (style and color).

6. Click **OK**.

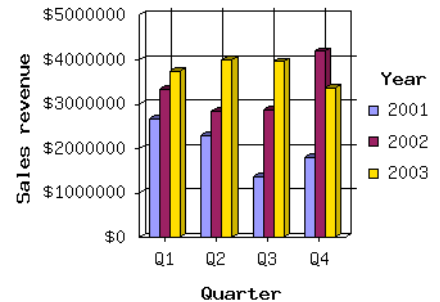
Web Intelligence applies the formatting properties to the legend, as you specified.

Applying a 2D or 3D look

You can format 2D charts with a 3D look. A 3D look shades the chart bars or pie segments, giving the 2D chart the appearance of being in relief.



A 2D bar chart *without* the 3D look



A 2D bar chart *with* the 3D look

To select a 2D or 3D look for a chart

1. Right-click the chart for which you want to select a 2D or 3D look.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **General** tab.
4. If you want to apply a 3D look to the chart, select **3D look**.

Or

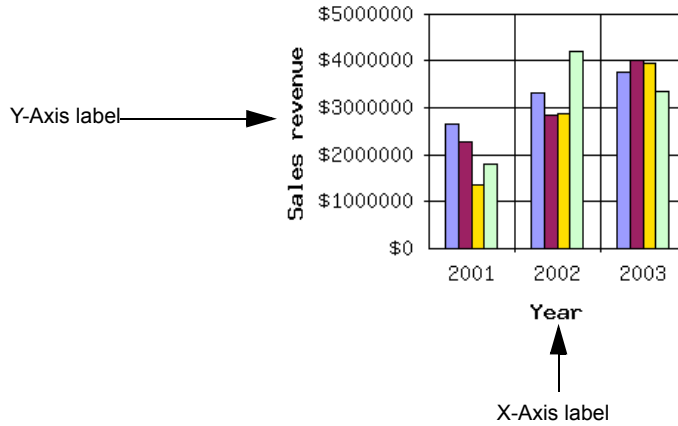
If you want to apply a 2D look to the chart, verify that the 3D look option is *not* selected.

5. Click **OK**.

Web Intelligence applies the 2D or 3D look you selected to the chart.

Formatting axis labels

Axis labels help identify the data represented by the values along each of the chart axis.



In this example, above, the Y-Axis label shows you that the dollar totals on the Y-Axis correspond to **Sales revenue** results and the X-Axis label shows you that the figures along the X-Axis represent dates for **Year**.

This section tells you how to:

- show or hide axis labels
- format axis labels

To show or hide axis labels

1. Right-click the chart where you want to modify.
2. Select **Format > Chart**.

The **Format Chart** dialog box appears.

3. Click the **General** tab.

To display axis labels, select the **Show X Axis**, **Show Y Axis**, and **Show Z Axis** check boxes, as appropriate.

Or

To hide axis labels, verify that the **Show X Axis**, **Show Y Axis**, and **Show Z Axis** check boxes are *not* selected, as appropriate.

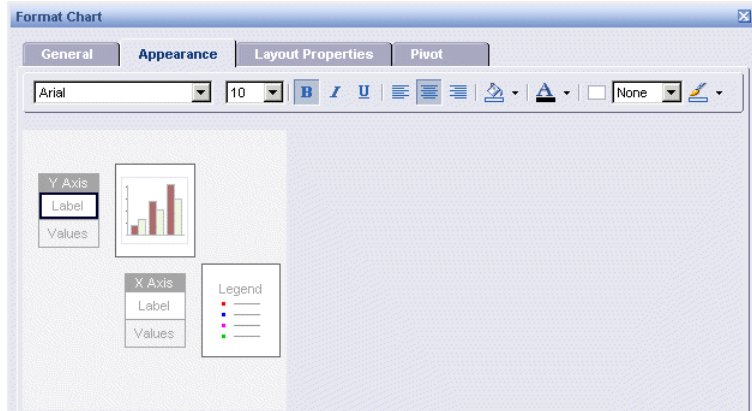
4. Click **OK**.

Web Intelligence shows or hides the axis labels on the chart, as you specified.

To format an axis label

1. Right-click the chart you want to modify.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **Appearance** tab.

4. Click **Label** on the **X-Axis**, **Y-Axis**, or **Z-Axis** preview pane, as appropriate.



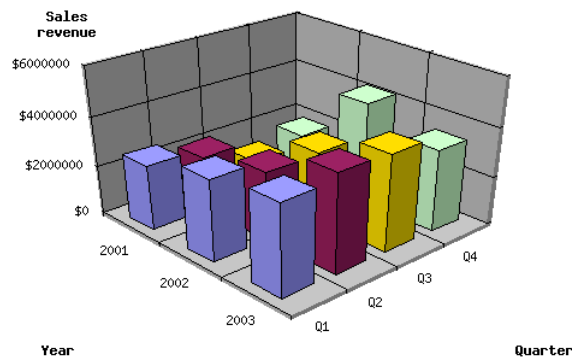
5. Use the options in the formatting toolbar on the **Appearance** tab to format the text, cell background, and cell borders of the chart title.
6. If you want to apply formatting changes to other axis labels, repeat steps 4 to 5.
Or
If you have finished your formatting modifications, click **OK**.
Web Intelligence applies your formatting changes to the axis label(s).

Formatting chart axis values, grids, and scales

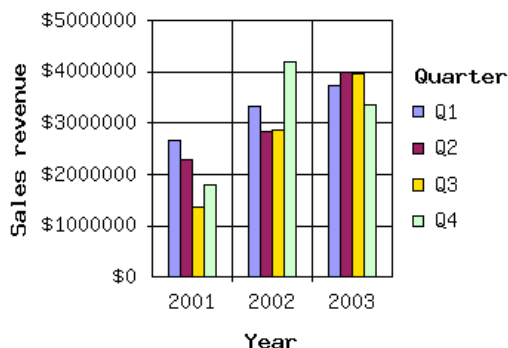
This section tells you how to format the values, grids, and scales for the different chart axes.

Understanding 3D and 2D chart axes

3D charts include three axes: the Y-Axis always displays values for measures (such as sales totals, margins, quantities and so on); the X- and Z-Axis display values for dimensions (that is, key indicators, such as time, geography, service lines, and so on). In this example, the chart bars display sales revenue per quarter, per year. The [Sales revenue] measure is on the Y-Axis, the [Quarter] dimension is on the X-Axis, and the [Year] dimension is on the Z-Axis:



When the same data is displayed on a 2D chart it looks like this:



In the second example, the 2D bar chart includes the optional Z-Axis with the values for quarter. Including data on the Z-Axis enables you to show an additional break down of the results displayed on the chart bars. Just like the 3D chart above, the [Sales revenue] measure is on the Y-Axis, the [Year] dimension is on the X-Axis, and the [Quarter] dimension is on the Z-Axis. Notice that because the Z-Axis cannot be represented graphically on a 2D chart, the legend provides the information for the Z-Axis values.

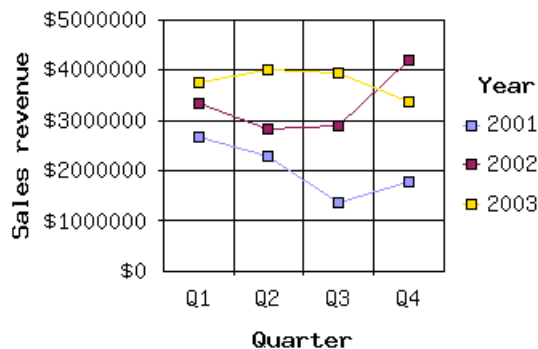
Formatting grids, values, and scales

This section tells you how to format axis:

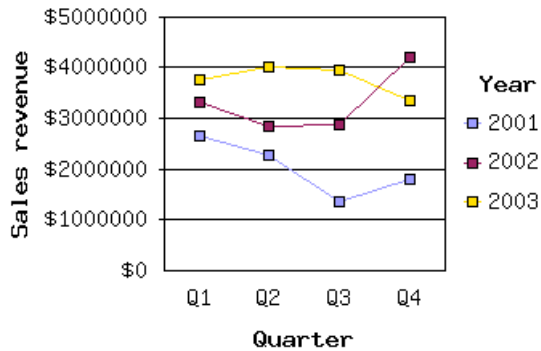
- grids
- values
- scales

Formatting the axis grid

The axis grid helps you identify how each result, on the bars or data markers of a chart, relates to the values along each axes. The following chart displays a grid along the Y-Axis and along the X-Axis:

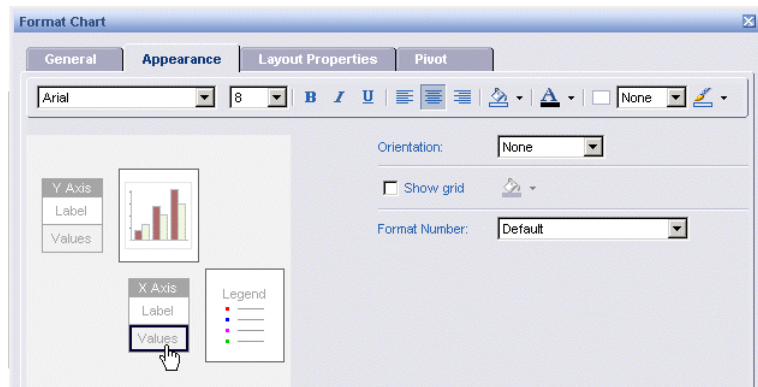


This chart only displays a grid on the Y-Axis:



To show or hide an axis grid

1. Right-click the chart you want to modify.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **Appearance** tab, and then click **Values** on the appropriate axis on the preview pane on the left.



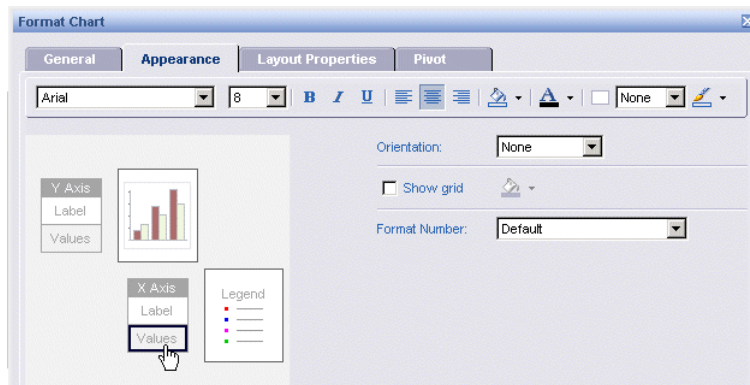
The options available for the selected axis appear.

4. To show the grid on the selected axis, select **Show grid**.
Or
To hide the grid on the selected axis, verify that the **Show grid** option is *not* selected.
5. Click **OK**.
The grid is shown or hidden, as you specified.

To format the grid color

1. Right-click the chart you want to modify.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.

3. Click the **Appearance** tab, and then click **Values** on the appropriate axis on the preview pane on the left.



The options available for the selected axis appear.

4. Verify that the **Show grid** option is selected.
5. Click the arrow next to the color wash button, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.
6. Click **OK**.

Web Intelligence applies the color(s) you selected to the chart axes.



Axis values

You can format how the values on each chart axis appear as follows:

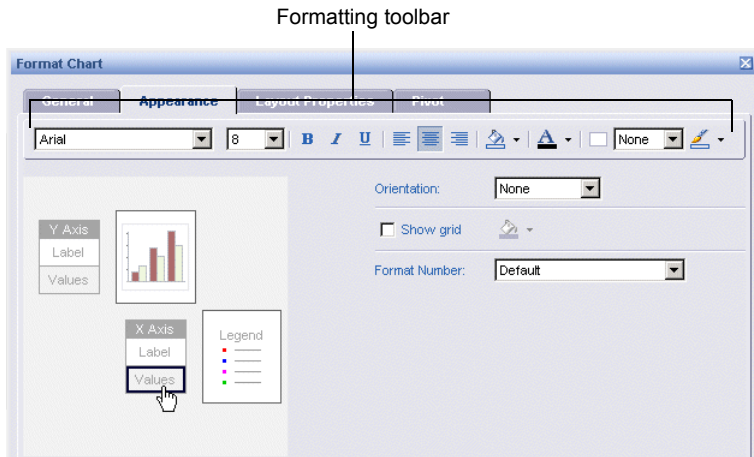
- axis value format – choose a specific number format for numbers, dates, currency, and so on, and choose the font size, orientation, and color for the text
- axis value frequency – display axis values along an axis at an automatic frequency or at a frequency you specify
- Y-Axis scale range – specify a min. or max. value on the Y-Axis

To define the text format and number format for axis values

1. Right-click the chart you want to modify.
2. Select **Format > Chart**.

The **Format Chart** dialog box appears.

3. Click the **Appearance** tab, and then click **Values** on the appropriate axis on the preview pane on the left.



The options available for the selected axis appear.

4. Use the options in the formatting toolbar on the **Appearance** tab to format the text, cell background, and cell borders of the chart title.
5. If you want to change the number format applied to numerical values or dates, click the arrow next to the **Number** drop-down list box, and then select the appropriate format.
6. Click **OK**.

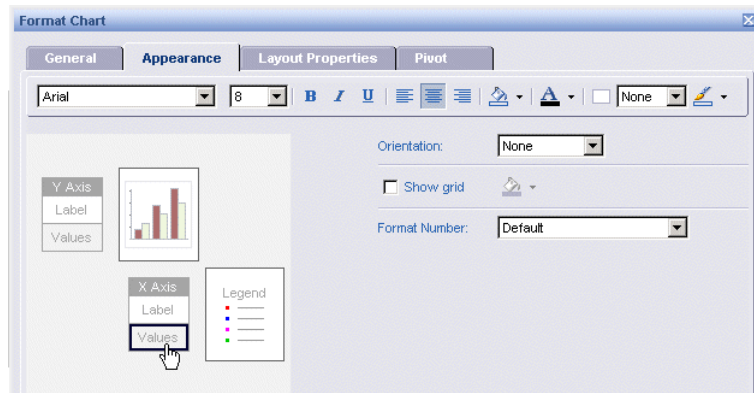
Web Intelligence applies the formats to the selected axis values on the chart, as you specified.

To set how frequently values display on an axis

1. Right-click the chart you want to modify.
2. Select **Format > Chart**.

The **Format Chart** dialog box appears.

3. Click the **Appearance** tab, and then click **Values** on the appropriate axis on the preview pane on the left.



The options available for the selected axis appear.

4. If you want Web Intelligence to display values along the axis at an automatic frequency, select **Auto axis value frequency**.
5. If you want to specify the frequency at which the values appear, deselect **Auto axis value frequency**, and then type the frequency you want

NOTE: If you type “2” every two values appear on the axis; if you specify “3” every three values appear on the axis, and so on.

6. Click **OK**.

Web Intelligence applies the axis frequency to the chart, as you specified.

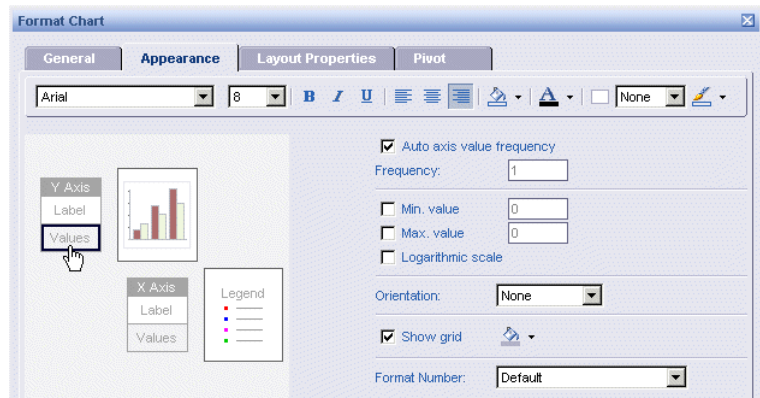
To define minimum or maximum values for display on the Y-Axis

1. Right-click the chart you want to modify.

2. Select **Format > Chart**.

The **Format Chart** dialog box appears.

3. Click the **Appearance** tab, and then click **Values** on the Y-Axis area of the preview pane on the left.



The options available for the Y-Axis appear.

4. To specify the minimum value, select **Min. value**, and then type minimum value you want, in the text box.
5. To specify the maximum value, select **Max. value**, and then type maximum value you want, in the text box.
6. Click **OK**.

Web Intelligence applies the minimum and maximum values to the Y-Axis on the selected chart, as you specified.

Displaying a linear or logarithmic scale for the Y-Axis

By default, Web Intelligence displays the Y-Axis on charts as a linear scale. You can set the axis to a logarithmic scale. Logarithmic scales allow you to examine values that span many orders of magnitude without losing information on the smaller scales.

Linear scales

In a linear scale, the axis markers are evenly spaced. Linear scales are based on addition. Consider, for example, the linear sequence:

1, 3, 5, 7, 9

To get the next number in the sequence, you add 2 to the previous number.

Logarithmic scales

Logarithmic scales are based on multiplication rather than addition. In a logarithmic scale, the steps increase or decrease in size. Logarithmic scales are based on multiplication (or division). Consider, for example, the logarithmic sequence:

2, 4, 8, 16, 32

To get the next number in the sequence, you multiply the previous number by 2. We can say that this sequence represents "base 2."

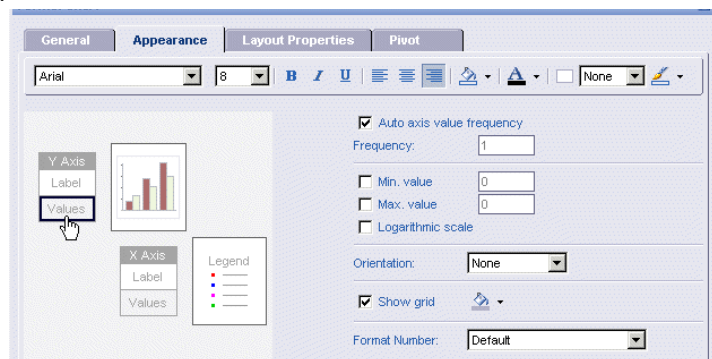
Consider the following sequence:

1, 10, 100, 1000, 10000

This sequence represents "base 10," because you get the next term in the sequence by multiplying the previous term by 10.

To change a Y-Axis scale to logarithmic or linear

1. Right-click the chart you want to modify.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **Appearance** tab, and then click **Values** on the **Y-Axis** area of the preview pane on the left.



The options available for the Y-Axis appear.

4. To display the Y-Axis as a logarithmic scale, select **Logarithmic scale**.

Or

To display the Y-Axis as a linear scale, verify that the **Logarithmic scale** option is *not* selected.

5. Click **OK**

Web Intelligence applies the type of scale you specified to the Y-Axis on the selected chart.

Formatting how data appears on the chart body

Results for data appear on charts as a series of bars, lines, markers, or segments depending on the type of chart. You can apply the following formatting options to the data series on charts:

- show/hide the values – for the data on each chart bar, line, or marker
- select a specific color – for the primary data series (that is, for the bars, lines, or markers that display the *first* measure on the chart body)
- show values on pie charts as percentages

To show or hide data values

1. Right-click the chart you want to modify.

2. Select **Format > Chart**.

The **Format Chart** dialog box appears.

3. Click the **General** tab.

4. To display the figures for each result on the chart bars, lines, markers, or segments, select **Show data values**.

Or

5. To hide the figures for each result on the chart bars, lines, markers, or segments, verify that **Show data values** is not selected.

6. Click **OK**.

Web Intelligence shows or hides the data values on the selected chart, as you specified.

To select a primary color

1. Right-click the chart you want to modify.

2. Select **Format > Chart**.

The **Format Chart** dialog box appears.

3. Click the **Appearance** tab.

4. In the **Data: Primary Color** section, click the arrow next to the color wash button, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.

5. Click **OK**.

Web Intelligence applies the color you selected to the first series of results on the chart, as you specified.



To show values on pie charts as percentages

1. Right-click the chart you want to modify.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **Appearance** tab.
4. In the **Data** section, select **Show values as percentages**.
5. Click **OK**.

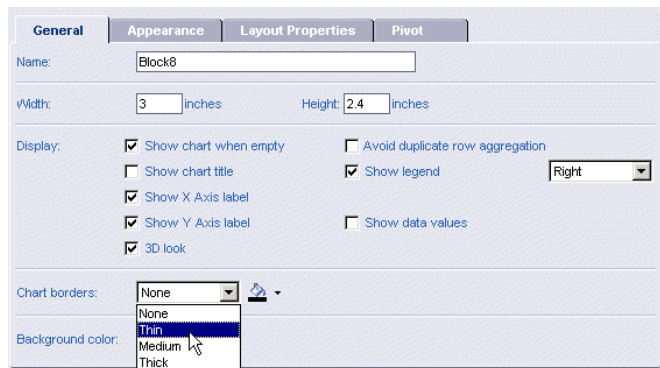
Web Intelligence displays the percentage figure for each result on the corresponding segment of the pie chart.

Formatting chart borders

You can select colors and styles for the borders and backgrounds on charts.

To select a border style and color

1. Right-click the chart.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **General** tab.
4. In the **Chart borders** section, click the arrow next to the drop-down list box, and then select the style you want for the border.



5. Click the arrow next to the color wash button, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.
6. Click **OK**.

Web Intelligence applies the style and color you selected to the chart borders.

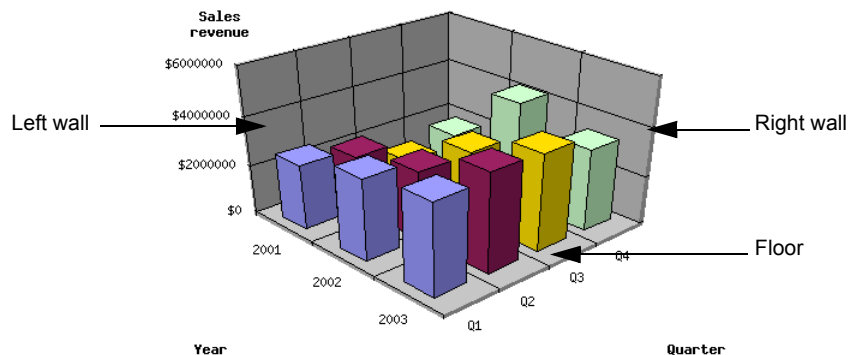
To remove a border

1. Right-click the chart.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **General** tab.

- In the **Chart borders** section, click the arrow next to the drop-down list box, and then select **None**.
- Click **OK**.
Web Intelligence removes the borders from the chart, as you specified.

Formatting chart backgrounds, walls, and floors

You can insert a color background behind charts. You can also show or hide walls and floors on charts and define their color.



You can show both walls *and* floors on 3D charts. You can show floors on 2D charts with a 3D look. To find out how to apply a 3D look to a 2D chart, see [“Applying a 2D or 3D look”](#) on page 142.

Note: You cannot show floors or walls on 2D charts without a 3D look.

To select a background color

- Right-click the chart.
- Select **Format > Chart**.
The **Format Chart** dialog box appears.
- Click the **General** tab.
- Click the arrow next to the color wash button, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.
- Click **OK**.
Web Intelligence applies the color you selected to the chart background.



To show or hide a chart wall or floor

- Right-click the chart.
- Select **Format > Chart**.
The **Format Chart** dialog box appears.
- Click the **Appearance** tab.

- Click the chart body area on the preview pane.

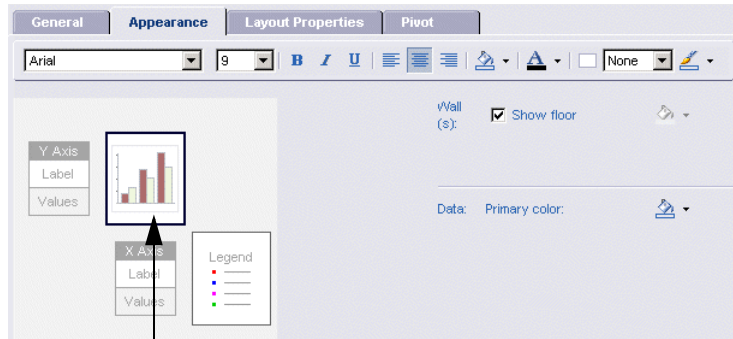


Chart body area

The options to show the chart floor and walls appear.

NOTE: You can show both walls *and* floors on 3D charts. You can only show floors on 2D charts with a 3D look.

- If you want to show the floor and/or walls on the chart, select **Show floor**, **Show left wall**, and/or **Show right wall**, as appropriate.

Or

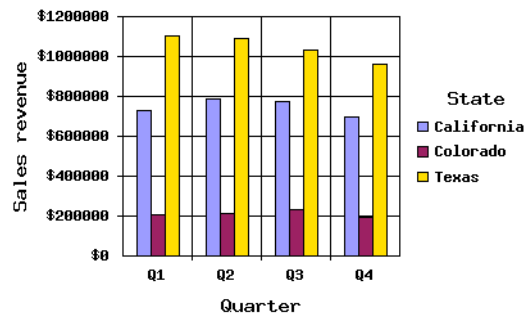
If you don't want to the floor and/or walls on the chart, verify that **Show floor**, **Show left wall**, and/or **Show right wall** are not selected, as appropriate.

- Click **OK**.

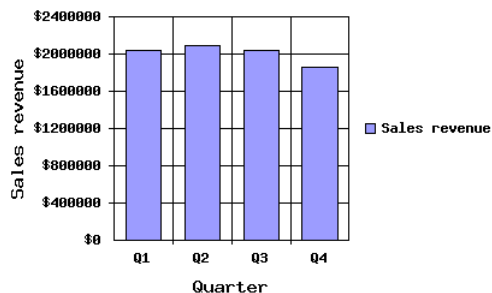
Web Intelligence shows or hides the chart floors and walls, as you specified.

Avoiding duplicate row aggregation

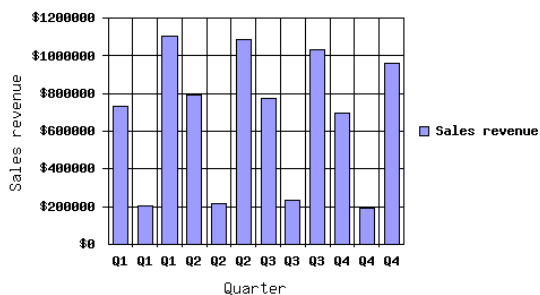
Web Intelligence automatically aggregates any rows that display the same set of dimensions. This example shows a chart that displays sales revenue by state and quarter:



If you remove the [State] dimension from the chart, Web Intelligence aggregates the sales revenue values per quarter and displays the sum of the sales revenue sum of all states per quarter:



If you select the **Avoid duplicate row aggregation** option, each duplicate value (in this case, for quarter) is displayed on a separate bar on the chart:



To apply or avoid duplicate row aggregation

1. Right-click the chart where you want to add a title.
2. Select **Format > Chart**.
The **Format Chart** dialog box appears.
3. Click the **General** tab.
4. If you want to aggregate duplicate values on the chart, verify that **Avoid duplicate row aggregation** is *not* selected.

Or

If you don't want to aggregate duplicate values on the chart, select **Avoid duplicate row aggregation**.

5. Click **OK**.

Web Intelligence applies the option you selected to the chart.

Dividing reports into sections

Overview

Dividing reports into sections enables you to group related information together in reports. This is particularly useful on large reports, since using sections also helps you navigate reports from section-to-section, using the hyperlinks in the Navigation Map. (For information on using the Navigation Map to view report sections, see ["To navigate to a section"](#) on page 40.)

This chapter tells you about:

- [how sections work](#)
- [inserting sections](#)
- [inserting sub-sections](#)
- [including hyperlinks to sections for easy report navigation](#)
- [setting page breaks for sections](#)
- [positioning sections on the report page](#)
- [formatting sections](#)
- [removing sections](#)

About sections

You can select a dimension on a table and divide the report into sections according to the value of the selected dimension. This enables you to group related information in reports and then navigate from section-to-section.

Example: Divide a long report into sections by state

In this example, you are viewing a report with a long table that provides results for the different states where the eFashion store has retail outlets. You want to divide the report into results by state and sub-divide each of the sections per state into sub-sections by year. To do this, you select "State" in a column header of a table and set State as a section.

California		
Year	Lines	Sales revenue
2001	City Skirts	\$11072
2001	City Trousers	\$10935
2002	City Skirts	\$22776
2002	City Trousers	\$22932
2003	City Skirts	\$41085
2003	City Trousers	\$14316

You then select "Year" in the table column header and set "Year" as a section below "State." Web Intelligence divides the report into sections by state with a sub-section per year.

California	
2001	
Lines	Sales revenue
City Skirts	\$11072
City Trousers	\$10935
2002	
Lines	Sales revenue
City Skirts	\$22776
City Trousers	\$22932
2003	
Lines	Sales revenue
City Skirts	\$41085

Inserting sections

To make reports easy to navigate, you can divide the report into sections that group related data together. The tables and charts in a section only display the data relevant to the dimension on which the section is created. For example, if you create a section on the [Year] dimension, the tables and charts in the section for "2003" will only display data for the year 2003.

A section consists of a section cell and the section itself. The section cell is a free standing cell that displays a value for a selected dimension (for example, state, customer, year, and so on). For example, if a report has a section on the year dimension and the database has data for the years 2001-2003, then there will be one section for year 2001 data, a second section for year 2002 data, and a third section for year 2003 data.

California		
Year	Lines	Sales revenue
2001	City Skirts	\$11072
2001	City Trousers	\$10935
2002	City Skirts	\$22776
2002	City Trousers	\$22932
2003	City Skirts	\$41085
2003	City Trousers	\$14316

Diagram labels: "Section cell" points to the "California" header. "Section" points to the entire table content.

There are two ways to create sections in reports:

- select a table cell – using this method, you can base sections on cells in tables and forms
- select an object available in the document – using this method, you can base sections on any objects listed in the **Available Objects** pane to the left of reports

To create a section from a table cell

1. With a Web Intelligence document open, right-click the table cell you want to make into a section.

The contextual menu appears.

Year	State	Lines	Sales revenue
2001	California	City Skirts	\$11,072
2001		City Trousers	\$10,935
2001		City Skirts	\$4,229
2001		City Trousers	\$2,772
2001		City Skirts	\$2,754
2001		City Trousers	\$4,610
2001		City Skirts	\$3,165
2001		City Trousers	\$3,766
2001		City Skirts	\$2,046
2001		City Trousers	\$6,122

2. Click **Set as section**.

Web Intelligence removes the selected cell from the table and creates the new section. The section cell at the top of each section displays one of the values for the object on which the section is based. For example, if you create a section by selecting a table cell displaying “2001” which is a value for the [Year] dimension, then each section cell displays a value for year, such as “2001,” “2002,” “2003,” and so on.

To add a section based on object available in the document

1. With a report in a Web Intelligence document open, verify that the **Document Properties** pane is displayed to the left of the selected report.
To display the Document Properties pane, click the **Show left pane** arrow at the top left of the report.
2. Click the arrow to the right of the drop-down list box, then select **Available Objects**.
3. Select the object, on which you want to base a section, and then drag-and-drop the selected object onto a blank area of the report *above* the tables and charts you want to include inside the section.

State	Lines	Sales revenue
California	City Skirts	\$11,072
California	City Trousers	\$10,935
Colorado	City Skirts	\$4,229

Web Intelligence creates the new section and inserts each value on the dimension that you selected for the section, into the section cell.

Creating sub-sections

You can create a report with multiple sections. You create multiple sections in the same way you create a section:

- by selecting a cell on a table and selecting **Set as section** from the contextual menu or
- by selecting a dimension object listed on the **Available Objects** pane, and then dragging and dropping the dimension below an existing section cell.

For step-by-step instructions on creating sub-sections, follow the instructions in ["To create a section from a table cell"](#) on page 159 or ["To add a section based on object available in the document"](#) on page 159.

Inserting hyperlinks to sections

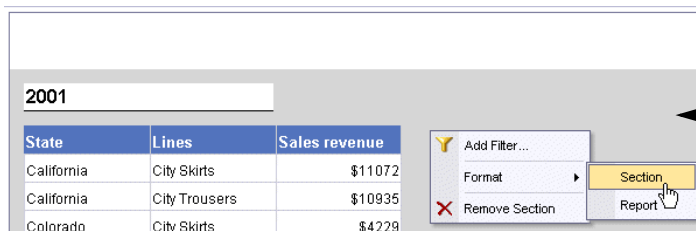
You can insert hyperlinks to each section in a report. This is a useful tool to help navigate long reports, section-by-section.

To show or hide a bookmark to a section

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format.

NOTE: Do *not* click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.

The contextual menu appears.



The gray highlighting on the section background indicates that the section is selected

2. Select **Format > Section**.
The **Format Section** dialog box appears.
3. Click the **General** tab.
4. Select **Include section in the Navigation Map**.
5. Click **OK**.

Web Intelligence creates hyperlinks to each of the section values and includes the hyperlinks in the **Navigation Map** pane. To see how to view the **Navigation Map** and navigate reports section-to-section, refer to *"To navigate to a section"* on page 40.

Setting page breaks for sections

You can control page breaks within sections, by selecting the following two options:

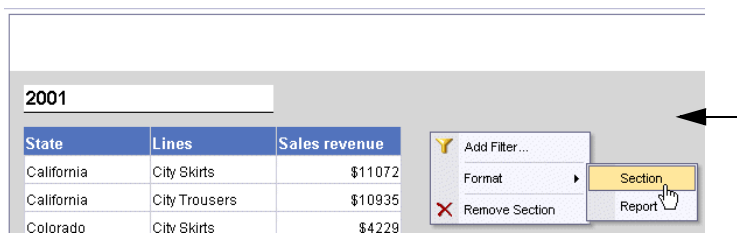
- start on a new page
- avoid page breaks in section

Defining page breaks on a section

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format.

NOTE: Do *not* click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.

The contextual menu appears.



The gray highlighting on the section background indicates that the section is selected

2. Select **Format > Section**.
The **Format Section** dialog box appears.
3. Click the **Page Layout** tab.
4. Select the appropriate options:

Insert a page break so that the section appears at the top of a new page,	Start on a new page
Prevent page breaks from occurring on the section, wherever possible,	Avoid page breaks in a block

1. Click **OK**.

Web Intelligence applies the page layout properties to the section, as you specified.

Positioning sections on the report page

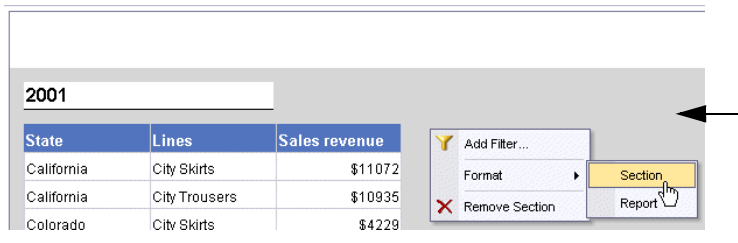
You can specify the position of a section on a report page, by specifying where you want the top of the section to appear.

To position a section on a report page

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format.

NOTE: Do *not* click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.

The contextual menu appears.



The gray highlighting on the section background indicates that the section is selected

2. Select **Format > Section**.
The **Format Section** dialog box appears.
3. Click the **Page Layout** tab.
4. In the **Position** section, specify where you want to position the left edge and the top edge of the section in relation to left edge and top edge of the report page.
5. Click **OK**.
Web Intelligence positions the top of the section on the report page, as you specified.

Formatting sections

You can personalize how the section background is formatted in the following ways:

- specify a background color
- include an image or skin
Skins are predefined images specially designed for the background of reports, sections, tables, or cells.

Note: Section cells can be formatted just like free standing cells or cells in tables. To format section cells see “[Formatting cell values](#)” on page 114 or “[Formatting tables and cells](#)” on page 111.

To select a background color for a section

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format.
The background of the selected section is highlighted gray.

NOTE: Do *not* click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.

The contextual menu appears.

2. Select **Format > Section**.

The **Format Section** dialog box appears.

3. Click the **Appearance** tab.

4. Click the arrow next to the color wash button, and then either select a predefined color or click **More colors...** to define a custom color, and then click **OK**.
5. Click **OK**.

Web Intelligence applies the color you selected to the section background.

To display an image on a section background

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format.
The background of the selected section is highlighted gray.

NOTE: Do *not* click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.

The contextual menu appears.

2. Select **Format > Section**.

The **Format Section** dialog box appears.

3. Click the **Appearance** tab.
4. In the **Pattern** section, select **Image (URL)**.
5. In the **Image (URL)** text box, type the file name or URL for the image file.



The following table will help you specify the file name:

If...	then...
the image file has been installed by your administrator in the images directory on the BusinessObjects Enterprise server,	type: boimg:// followed by the file name. For example, if the file name is "efashion_logo.gif," then type: boimg://efashion_logo.gif <hr/> NOTE: Image files need to be installed by your administrator at the following directory on the BusinessObjects Enterprise server: <hr/> <INSTALL DIR>\Images
the image file is located on another web server,	type the URL. For example: http://www.internal.businesscompany.com/images/company_logo.gif

NOTE: The size of the image is defined when the image is created. You cannot modify the size of the image using Web Intelligence.

Click the arrow to the right of the **Display** drop-down list box, and then select how you want the image to be displayed:

If you want to...	then select...
display the image once at the top left of the report, section, table, or cell,	Normal
stretch the image over the entire report area, <hr/> NOTE: this option is only applied when you view or save the report as a PDF file. (See "To save a Web Intelligence document as a PDF file" on page 250.)	Stretch (PDF only)
repeat the image vertically and horizontally,	Tile
repeat the image horizontally across,	Horizontal tile
repeat the image vertically downward,	Vertical tile

1. If you selected **Normal** as the image display format, you can specify how you want the image to be vertically and horizontally aligned by clicking the arrows in the list boxes next to **Position** and selecting the appropriate vertical and horizontal position.
2. Click **OK**.
Web Intelligence applies the image you selected to the section background.

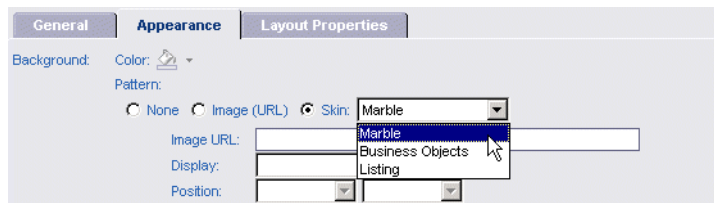
To display a skin on a section background

1. With a Web Intelligence document open, right-click an empty area of the section that you want to format.
The background of the selected section is highlighted gray.

NOTE: Do *not* click the section cell. If you click the section cell, the formatting options available to you correspond to options you can use to format the individual cell, not the entire section.

The contextual menu appears.

2. Select **Format > Section**.
The **Format Section** dialog box appears.
3. Click the **Appearance** tab.
In the **Pattern** section, select **Skin**.
The list of available skins appears in the drop-down list box to the right.



4. Select the skin you want.
5. Click **OK**.
Web Intelligence applies the skin you selected to the section background.

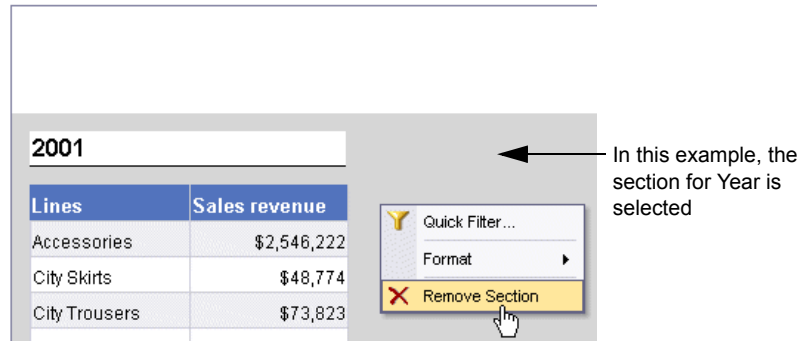
Removing sections

You can remove sections from reports at any time. When you remove a section, Web Intelligence regroupes the tables and charts in reports accordingly.

To remove a section

1. With a Web Intelligence document open, right-click a section you want to remove.

Make sure that the section is selected, and *not* the section cell.



The contextual menu appears.

2. Select Remove Section.

Web Intelligence removes the section and regroups the report data accordingly.

Organizing results on tables using breaks and sorts

Overview

You can organize the information displayed in reports, by using sorts and breaks, so that reports are easy to read and navigate. Sorts enable you to order results alphabetically or numerically and breaks enable you to group related information together in tables.

This chapter tells you:

- [about sorts – the sort orders available with Web Intelligence](#)
- [how to apply and remove sorts](#)
- [about breaks](#)
- [how to insert, remove, and prioritize breaks](#)
- [set display properties and page layout properties for breaks](#)

About using sorts

You can apply sorts to the results displayed in:

- section cells – to organize the order in which sections are displayed on a report
- tables – to organize the order in which results are displayed in a column or row

Note: You can apply multiple sorts to a table or section and then prioritize the sorts, so that the information is sorted in the order you require. To do this, you need to set your **Reporting Rules** so that Web Intelligence always makes the last sort you apply either (a) take precedence over other sorts or (b) be the last sort to be applied after other sorts. For full information on how to do this, see ["To define your reporting rules"](#) on page 30.

Available sort orders

The following sort orders are available:

Sort order	Description
Default	This is sometimes referred to as the "natural" order. Depending on the type of data in the column or row, the results are sorted as follows: <ul style="list-style-type: none">• ascending numeric order for numeric data• ascending chronological order for date• alphabetical order for alphanumeric data
Ascending	When selected, results are arranged in ascending order: The smallest value at the top of the column moving to the highest value at the bottom. For example: 100, 200, 300 or California, Colorado, Florida.
Descending	When selected, results are arranged in descending order: The highest value at the top of the column moving to the smallest value at the bottom. For example: 300, 200, 100 or Florida, Colorado, California.
Custom	When you define a custom sort, you choose your own sort order for the data.

Note: To sort months in chronological order, apply the **Default** sort order.

Applying and removing sorts

You can apply sorts to any of the following types of data on tables or sections:

- **dimensions** - typically retrieve character-type data.
For example: customer names, line names, or dates.

- **details** – provide descriptive data about a dimension.
For example: [Age] is a detail associated with the [Customer] dimension.
- **measures** – Retrieves numeric data that is the result of calculations on data in the database.
For example: [Sales Revenue] is the calculation of the number of units sold multiplied by the unit price.

Sorting dimensions and details helps you organize results chronologically, while sorting measures helps you see highest or lowest results at a glance.

To apply an ascending or descending sort to a table or section

1. Right-click the table column/row or section cell you want to sort, and then on the contextual menu, click **Sort > Descending** or **Sort > Ascending**.

Or

Click the table column/row or section cell you want to sort, and then click the **Ascending** or **Descending** sort button on the **Report** toolbar.

To display the **Report** toolbar, right-click the main toolbar above the report, and then click **Report** on the contextual menu.



State	Sales revenue
California	\$7,479,569
Colorado	\$2,060,275

← The selected column is highlighted

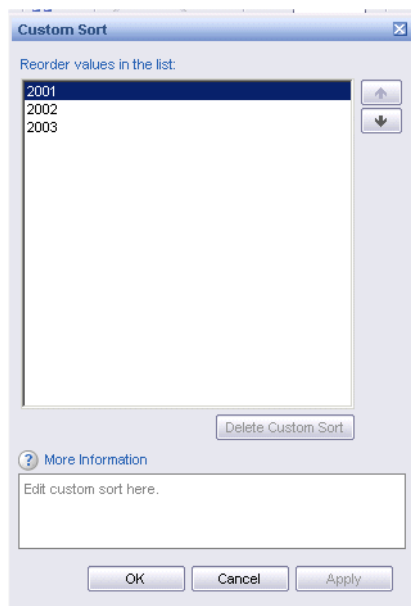
For a full description of how each sort order impacts character, numeric, and date data, see "[Available sort orders](#)" on page 168.

Web Intelligence applies the ascending or descending order to the results on the table or section, as you specified.

To apply a custom sort

1. Right-click the table column/row or section cell you want to sort, and then on the contextual menu, click **Sort > Custom Sort**.

The Custom Sort dialog box appears.



2. Select an item in the list then click the down or up button to the right of the list to move the item up or down in the list.
3. Repeat step 2 until the items are sorted in the order you want.
4. Click **OK**.

Web Intelligence sorts the items according to the custom sort order you specified.

To remove a custom sort

1. Right-click the table column/row or section cell on which you have applied a custom sort, then click **Sort > Custom Sort** on the menu.
The Custom Sort dialog box appears
2. Click **Delete Custom Sort**.

You can also delete a custom sort by using the following procedure:

1. Right-click the table column/row or section cell on which you have applied a custom sort, then click **Sort > Properties** on the menu.
The Sort Properties dialog box opens showing all the sorts defined on the block.
2. Select the sort you want to delete and click **Remove**.

To view the sorts defined on a block

1. Select any cell in the table.
2. Right-click and select **Sort > Properties**.

The Sort Properties dialog box opens and shows the list of sorts defined on the table.

NOTE: You can also define a custom sort from the Sort Properties dialog box by clicking **Custom Sort**, which takes you to the Custom Sort dialog box.

Defining multiple sorts

You can apply multiple sorts to a table or section and then prioritize the sorts, so that the information is sorted in the order you require. To do this, you need to set your **Reporting Rules** so that Web Intelligence always makes the last sort you apply either (a) take precedence over other sorts or (b) be the last sort to be applied after other sorts. For full information on how to do this, see ["To define your reporting rules"](#) on page 30.


About breaks

A break is a division in a table that groups data with the same results.

Example: How can I show revenue subtotals for each state in a table?

The table on the left displays sales revenue per year per state, with the total sales revenue result displayed at the bottom of the table. The table on the right displays the same data, but with a break on "State." In this table, the results for each state are grouped together. This means you can now show a subtotal for the revenue generated by each state.

Year	State	Sales revenue
2001	California	\$1,704,211
2001	Colorado	\$448,302
2001	Florida	\$405,985
2002	California	\$2,782,680
2002	Colorado	\$768,390
2002	Florida	\$661,250
2003	California	\$2,992,679
2003	Colorado	\$843,584
2003	Florida	\$811,924
	Sum:	\$11,419,003



Year	State	Sales revenue
2001	California	\$1,704,211
2002		\$2,782,680
2003		\$2,992,679
	California	\$7,479,569
2001	Colorado	\$448,302
2002		\$768,390
2003		\$843,584
	Colorado	\$2,060,275
2001	Florida	\$405,985
2002		\$661,250
2003		\$811,924
	Florida	\$1,879,159
	Sum:	\$11,419,003

Inserting breaks in tables enables you to:

- organize how information is presented, by grouping related information together
- display subtotals for each group of information

How data is sorted when you insert a break

When you insert a break on a dimension, the values for the dimension are automatically sorted in ascending order. If the values are numeric, the lowest value appears in the first row of the table and the highest result appears in the last row. If the values are

alphabetical characters, then the values are sorted in alphabetical order from top to bottom. You can change this sort order at any time. For information on how to apply sorts, see ["To apply an ascending or descending sort to a table or section"](#) on page 169.

Inserting, removing, and prioritizing breaks

You can insert one or multiple breaks on a table or crosstab. You can insert breaks on any columns or rows that display values for:

- **dimensions** - typically retrieve character-type data.
For example: customer names, line names, or dates.
- **details** – provide descriptive data about a dimension.
For example: [Age] is a detail object that is associated with the [Customer] dimension.

Note: You cannot insert a break on columns or rows that display a measure.

You can prioritize breaks on tables to organize groups of data on tables within other groups. For example, if you want to group data on a table by country and then, within each country, group that data by customer, you need to insert a break on the [Country] dimension and on the [Customer] dimension, and then give first priority to the break on [Country].

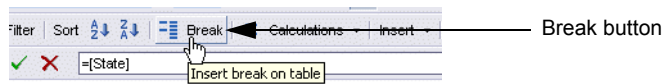
To insert or remove a break

1. Right-click the table cell containing the results you want to group together, and then on the contextual menu, click **Break > Insert**.

Or

Click the table cell containing the results you want to group together, and then click the **Break** button on the **Report** toolbar.

To display the **Report** toolbar, right-click the main toolbar above the report, and then click **Report** on the contextual menu.



State	Quarter	Sales revenue
California	Q1	\$729,745
California	Q2	\$789,398

An arrow points from the text 'The selected column for "State" is' to the 'State' column header in the table.

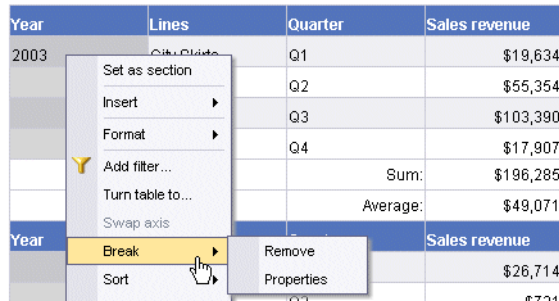
Web Intelligence groups the selected data together on the table, by inserting a break, and inserts a footer at the end of each break

State	Quarter	Sales revenue
California	Q1	\$729,745
	Q2	\$789,398
	Q3	\$775,766
	Q4	\$697,770
California		

An arrow points from the text 'The data for each state is grouped together' to the first row of the table (California, Q1, \$729,745).

To prioritize breaks on a table

1. With a Web Intelligence document open, right-click the cells in the table break. The contextual menu appears.

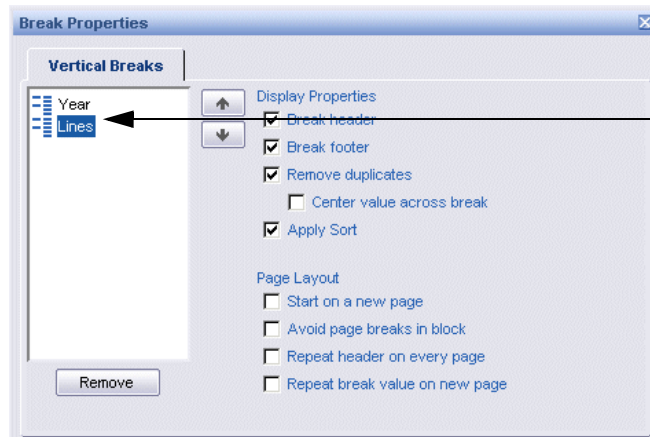


Year	Lines	Quarter	Sales revenue
2003	Q1	Q1	\$19,634
	Q2	Q2	\$55,354
	Q3	Q3	\$103,390
	Q4	Q4	\$17,907
		Sum:	\$196,285
		Average:	\$49,071
Year	Lines		Sales revenue
			\$26,714

2. Click **Break > Properties**

The **Break Properties** dialog box appears.

Each break on the selected table is listed in the pane on the left.



The breaks are listed here

3. Select the break you want to move, and then click either the **Move break up** or the **Move break down** arrow.
4. Click **OK**.

Web Intelligence reorders the breaks on the table, as you specified.

Setting display properties and page layout for breaks

When you first insert a break on a table, certain display options are applied by default. You can edit these default settings and apply options for the following:

- Display properties – how the results display on the break
- Page layout properties – how the breaks display on the report page

Break display properties

You can set the following display properties for a break:

Format option	When selected...																		
Break header	<p>A header is displayed for each group of results or <i>break</i> on the table. For example, this table has a break on "Year," so each value for year has a separate break header:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>State</th> <th>Sales revenue</th> </tr> </thead> <tbody> <tr> <td>2002</td> <td>California</td> <td>\$2,782,680</td> </tr> <tr> <td></td> <td>Colorado</td> <td>\$768,390</td> </tr> <tr> <td></td> <td>Florida</td> <td>\$661,250</td> </tr> <tr> <td>2002</td> <td></td> <td></td> </tr> </tbody> </table> <p>← the break header for</p>	Year	State	Sales revenue	2002	California	\$2,782,680		Colorado	\$768,390		Florida	\$661,250	2002					
Year	State	Sales revenue																	
2002	California	\$2,782,680																	
	Colorado	\$768,390																	
	Florida	\$661,250																	
2002																			
Break footer	<p>A footer is added below each group of results or <i>break</i> on the table. When you apply a calculation to the results, the result is shown in the footer. For example, this table has a break on "Year," so each value for year has a separate break footer:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>State</th> <th>Sales revenue</th> </tr> </thead> <tbody> <tr> <td>2002</td> <td>California</td> <td>\$2,782,680</td> </tr> <tr> <td></td> <td>Colorado</td> <td>\$768,390</td> </tr> <tr> <td></td> <td>Florida</td> <td>\$661,250</td> </tr> <tr> <td>2002</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Sum:</td> <td>\$4,212,319</td> </tr> </tbody> </table> <p>← the break footer for year 2002 includes the Sum for</p>	Year	State	Sales revenue	2002	California	\$2,782,680		Colorado	\$768,390		Florida	\$661,250	2002				Sum:	\$4,212,319
Year	State	Sales revenue																	
2002	California	\$2,782,680																	
	Colorado	\$768,390																	
	Florida	\$661,250																	
2002																			
	Sum:	\$4,212,319																	
Remove duplicates	Removes all duplicate values from the data in a table when you insert a break. Each value is only shown once.																		
Center value across break	<p>Active when Remove Duplicates is selected. It merges empty cells and centers the values for the dimension or detail in each break on the table.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>State</th> <th>Sales revenue</th> </tr> </thead> <tbody> <tr> <td rowspan="3">2002</td> <td>California</td> <td>\$2,782,680</td> </tr> <tr> <td>Colorado</td> <td>\$768,390</td> </tr> <tr> <td>Florida</td> <td>\$661,250</td> </tr> <tr> <td>2002</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Sum:</td> <td>\$4,212,319</td> </tr> </tbody> </table> <p>← The year value on the break is</p>	Year	State	Sales revenue	2002	California	\$2,782,680	Colorado	\$768,390	Florida	\$661,250	2002				Sum:	\$4,212,319		
Year	State	Sales revenue																	
2002	California	\$2,782,680																	
	Colorado	\$768,390																	
	Florida	\$661,250																	
2002																			
	Sum:	\$4,212,319																	
Apply sorts	Applies an ascending sort to the values in the break.																		

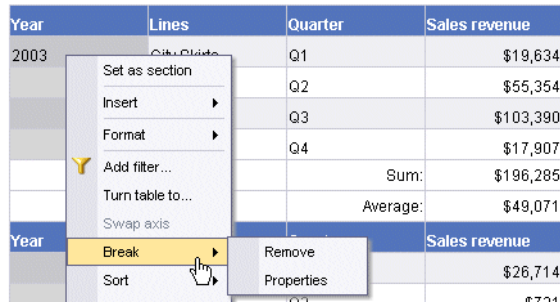
Break page layout properties

You can set the following page layout properties for breaks:

Page layout property	Description
Start on a new page	Displays each part of the table crosstab, or form created by a break on a new page.
Avoid page breaks in blocks	Where possible, keeps each break section on the same page. This option is not taken into account when a block is larger than one page.
Repeat header on every page	Repeats the header at the top of the table on every new page when a table goes over onto a new page.
Repeat break value on new page	Repeats the current value on each new page.

To set properties for a break

1. With a Web Intelligence document open, right-click the cells in the table break. The contextual menu appears.



2. Click **Break > Properties**
The **Break Properties** dialog box appears.
3. In the **Break Display Properties** section, select the appropriate break display properties.
See "[Break display properties](#)" on page 174.
4. In the **Page Layout** section, select the appropriate page layout properties.
See "[Break page layout properties](#)" on page 175.
5. Click **OK**.
Web Intelligence applies the properties to the break, as you specified.

Filtering results on reports

Overview

This chapter describes how you can limit the data displayed in your Web Intelligence reports by using report filters after the report data has been retrieved from the data source.

This chapter explains:

- [how report filters work](#)
- [how to add and remove filters](#)
- [how to combine and nest filters](#)
- [how to view, edit, and delete filters](#)

How report filters work

You can filter the data displayed in Web Intelligence reports to focus on the information that interests you for a specific business purpose.

What makes up a report filter?

Web Intelligence supports two types of filters:

- query filters - these filters are defined on the query; they limit the data retrieved from the data source and returned to the Web Intelligence document
- report filters - these filters limit the values displayed on reports, tables, charts sections within the document, but they don't modify the data that is retrieved from the data source; they simply hide values at the report level

This chapter is concerned with report filters.

What types of report filter can you create?

You can create three type of report filter:

- quick filter - allows you to filter the data in one dimension or measure
- combined filter - allows you to filter the data in multiple dimensions and measures and allows filters to be combined
- nested filters - allows you to set up an order of precedence between simple and combined filters

Values used with filter operators

The number of values that you can use in the filter depends on the operator. For example, you can specify many values when you use the In List operator, you can specify one value only when you use the Equal To operator, and you do not specify a value when you use

the Is Null operator. The appearance of the **Quick Filter** dialog box changes slightly depending on the operator you select to accommodate the number of values used with the operator.

The following table lists the values used with filter operators:

Equal to	One value
Not equal to	
Greater than	
Greater than or equal to	
Less than	
Less than or equal to	
Between	Two values
Not between	
In list	A list of values
Not in list	
Is Null	No value

Operators available in report filters

The following table lists the operators that you can use in report filters:

equal to a value you specify,	retrieve data for the US only,	Equal to	[Country] Equal to US.
not equal to a value you specify	retrieve data for all countries except US	Not equal to	[Country] \ Not equal to US
greater than a value you specify,	retrieve data for customers aged over 60,	Greater than	[Customer Age] Greater than 60

greater than or equal to a value you specify,	retrieve data for revenue starting from \$1.5M upward,	Greater than or equal to	[Revenue] Greater than or equal to 1000500
lower than a value you specify,	retrieve data for exam grades below 40,	Less than	[Exam Grade] Less than 40
lower than or equal to a value you specify,	customers whose age is 30 or less,	Less than or equal to	[Age] Less than or equal to 30
between two values you specify that includes those two values,	weeks starting at week 25 and finishing at 36 (including week 25 and week 36),	Between	[Weeks] Between 25 and 36
outside the range of two values you specify,	all the weeks of the year, except for weeks 25 through 36 (week 25 and week 36 are not included),	Not between	[Weeks] Not Between 25 and 36
the same as several values you specify,	you only want to retrieve data for the following countries: the US, Japan, and the UK,	In list	[Country] In list 'US; Japan; UK'
different from the multiple values you specify,	you don't want to retrieve data for the following countries: the US, Japan, and the UK,	Not in list	[Country] Not in list 'US; Japan; UK'

for which there is no value entered on the database,	customers without children (the children column on the database has Null as the data entry),	Is null	[Children] Is null
for which a value was entered on the database,	customers with children (the children column on the database does not have Null as the data entry),	Is not Null	[Children] Is not Null
that doesn't include a specific string,	customers whose date of birth is not 1972,	Different from pattern	[DOB] Different from pattern, '72'
that corresponds to two values you specify,	telco customers who have both a fixed telephone and a mobile phone,	Both	[Account Type] Both "fixed" and "mobile"
that corresponds to one value you specify and does not correspond to another value you specify	telco customers who have a fixed telephone, but don't have a mobile phone,	Except	[Account Type] "fixed" Except "mobile"

Adding and removing report filters

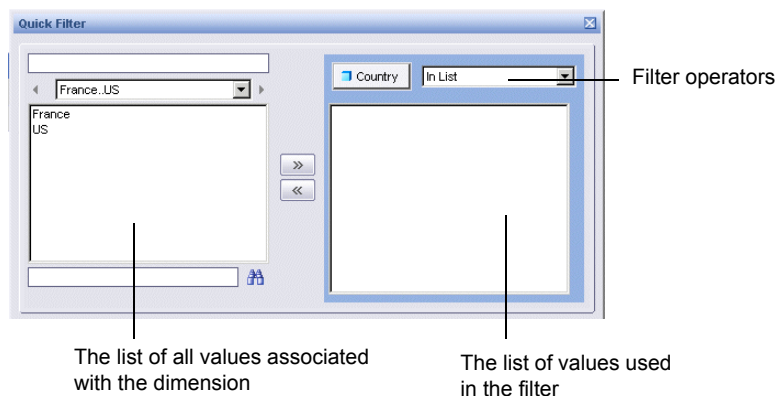
You can add quick filters to dimensions, details, or measures

To define a quick report filter

1. Select the dimension, detail or measure in the table.

2. Click the **Filter** button on the **Report** toolbar or right-click and click **Quick Filter** on the menu. (To display the **Report** toolbar, click **View** on the menu, then click **Toolbars > Report.**)

The **Quick Filter** dialog box appears.



3. Select the operator you wish to use in the filter from the drop-down list. For a list of all supported operators, see ["Operators available in report filters"](#) on page 178.
4. Select the values that you wish to use in the filter and click **>>** to add them to the list of filter values. (The number of values that you can add depends on the operator you chose. For more details, see ["Values used with filter operators"](#) on page 177.)
5. To remove a value from the filter, select the value in the list of filter values, then click **<<**.
6. Click **OK** to close the dialog box and apply the report filter.

Combining and nesting filters

Typical business questions require you to retrieve information that matches more than one criterion. For example, if you are analyzing customer services data, you will most likely want to focus on customers for a specific time period *and* also for a specific region, *and* probably also for a specific level of customer service contract. With Web Intelligence, you retrieve data that answers several criteria like this by combining filters in the same query.

Combining filters

You combine filters by including more than one restriction on dimensions, details or measures. For example, the filter `Country = 'US' AND Resort = 'Bahamas Beach'` combines two filters. In this case Web Intelligence displays only those rows that satisfy both criteria.

The AND and OR operators

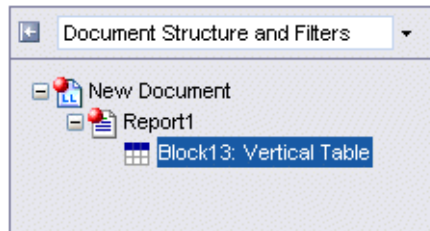
The two operators you use to combine and nest filters are the AND operator and the OR operator. When you use AND to combine filters, Web Intelligence displays only the data that matches the criteria in both the filters linked by the operator. When you use OR, Web

Intelligence returns the data that matches the criteria *in either one of* the filters linked by the operator.

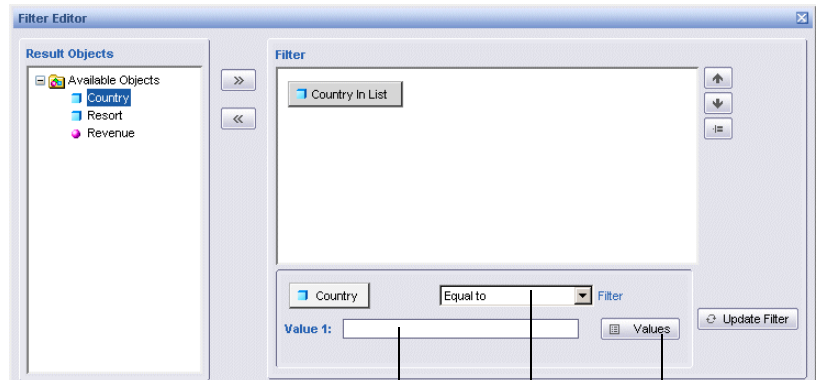
You can mix the AND and OR operators when combining and nesting filters. For example, you can link three filters in the relationship (Filter1 OR Filter2) AND Filter3. In this case, Web Intelligence first restricts the data by the conditions in either Filter1 or Filter2. Web Intelligence then compares this data with the condition in Filter3 and returns only the data that corresponds to this condition.

To define a combined filter

1. Display the **Document Structure and Filters** overview by selecting **Left panel** from the **View** menu then selecting **Document Structure and Filters** from the drop down list at the top of the Left panel.
2. Select the table that you want to filter in the **Document Structure and Filters** overview.



3. Click **Add Filter**.
The **Filter Editor** appears.



Type the value(s) on which you wish to filter or click Values to select them from a list of values

Select the operator associated with the dimension here

4. Select the dimension, detail or measure that you want to include in the filter, then click >> or drag the filter to the **Filter** pane to add it to the filter.
5. To remove a dimension, detail or measure from the filter, select it in the **Filter** pane, then click << or drag the dimension, detail or measure back to the **Available Objects** pane.
6. Select the dimension, detail or measure in the **Filter** pane.
7. Select the operator that you want to use with the dimension, detail or measure from the drop down list of operators.
8. Type the value or values that you want to associate with the operator or click **Values** to display the **Quick Filter** dialog box that you use to select the values by which to filter. For more details on quick filters, see ["To define a quick report filter"](#) on page 180. The number of values that you associate with the operator depends on the operator. For more details, see ["Values used with filter operators"](#) on page 177.
9. Click **Update Filter**.
The filter on the dimension, detail or measure is updated in the **Filter** pane. For example, if you filtered the Country dimension to return only those rows where the country is 'US', the text reads 'Country Equal To US'.
10. Repeat from [step 4](#) for all dimensions, details and measures that you want to include in the filter.
When you add multiple dimensions, details or measures, Web Intelligence links them by default with the AND operator. To toggle between AND and OR, double click the operator.
For more information on the AND and OR operators, see ["The AND and OR operators"](#) on page 181

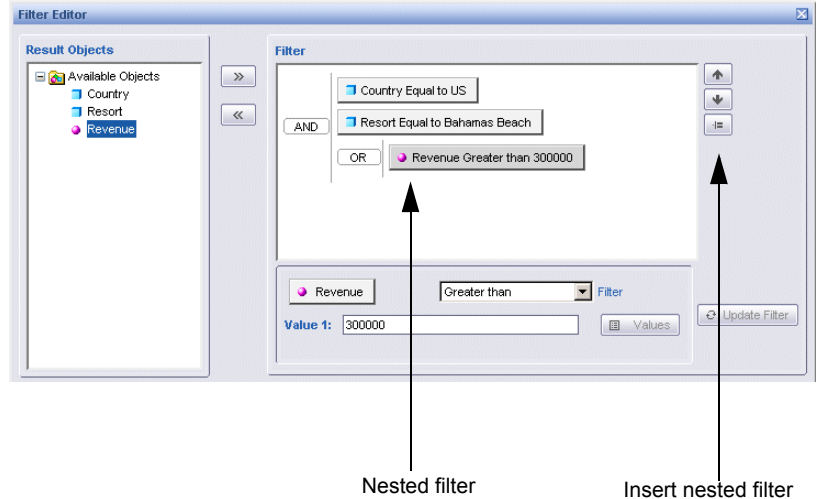
Nesting filters

When you nest filters you set up an order of precedence between them. Web Intelligence executes the first filter in the order or precedence, then applies subsequent filters. (Country = 'US' AND Resort = 'Bahamas Beach') OR (Revenue > 500000) is an example of combined and nested filters. Web Intelligence filters according to the nested filter Country = US AND Resort = Bahamas Beach (which is also an example of a combined filter) then applies this filter along with the combined filter Revenue > 500000.

To nest report filters

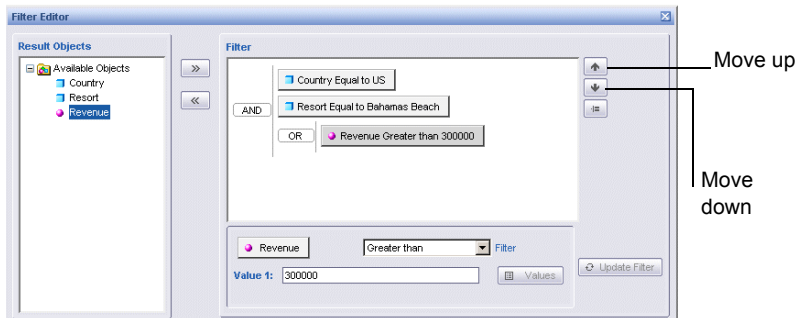
1. Create the initial filter.
2. Select the dimension in the initial filter. (Select any of the dimensions or operators in the initial filter if it is a combined filter.)
3. Click **Add Nested Filter**.
Web Intelligence adds a nested OR operator to the initial filter.
4. Select the OR operator.
5. Double click the OR operator to change it to AND if you want your nested filter to be linked to the initial filter by an AND operator.

- Select the dimension(s) that you want to appear in the nested filter and click >>, or drag them to the right of the operator that links the nested filter to the initial filter. The image below shows a nested filter in the **Edit Filter** dialog box.



To change the order of nested filters

- Select a dimension, detail or measure in the filter.
- Click **Move up** or **Move down** to change the place of the dimension, detail or measure.



What happens to the dimension, detail or measure depends on its position in the filter. In the above example:

- if the Revenue Greater Than filter is moved up, it becomes part of the outer filter and the nested filter becomes blank;
- if the Resort Equal To filter is moved up, it moves above the Country Equal To filter in the combined filter.

Viewing, editing and deleting report filters

Viewing the filters applied to reports helps understand the context of the results displayed on the tables, charts, and sections. You can edit or delete filters from reports at any time.

To view the filters applied to reports

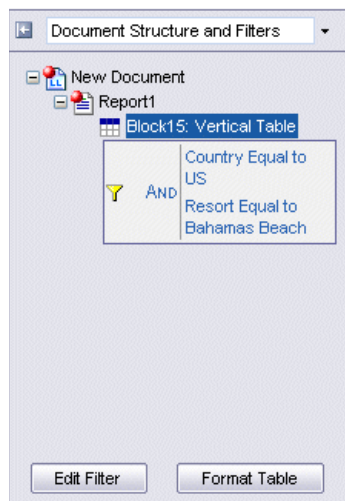
1. Display the **Document Structure and Filters** by selecting **Left panel** from the **View** menu then selecting **Document Structure and Filters** from the drop down list at the top of the Left panel.
The **Document Structure and Filters** displays the overview of the filters in the report.

To edit a report filter

1. Select the table on which the filter is applied in the Left panel and click **Edit Filter**.
The **Edit Filter** dialog box appears.
2. Follow the steps in ["To define a combined filter"](#) on page 182 to change the filter definition.

To edit one dimension in a report filter

1. Display the **Document Structure and Filters** by selecting **Left panel** from the **View** menu then selecting **Document Structure and Filters** from the drop down list at the top of the Left panel.
2. Select the filtered dimension in **Document Structure and Filters**.

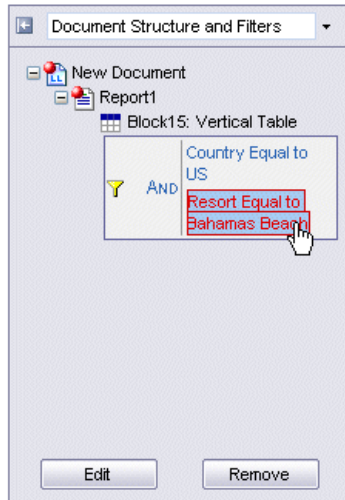


3. Click **Edit**.
The **Filter Editor** appears.
Edit the filter on the dimension by following the steps described in ["To define a quick report filter"](#) on page 180.

To remove a report filter

1. Display the **Document Structure and Filters** overview by selecting **Left panel** from the **View** menu then selecting **Document Structure and Filters** from the drop down list at the top of the Left panel.

2. Select the filter you want to remove.



3. Click **Remove**.

You can also remove individual parts of the filter by selecting the dimension, detail or measure individually then clicking **Remove**.

Inserting standard calculations

Overview

You can insert predefined calculations into Web Intelligence reports. These predefined calculations allow you to perform standard business calculations on your data.

This chapter tells you:

- [what predefined calculations you can add to reports](#)
- [how to insert and remove calculations](#)

Available predefined calculations

Web Intelligence allows you to add the following predefined calculations:

Sum	Calculates the sum of the numbers in the column.
Count	Counts the number of rows. (All rows in the case of measure objects, distinct rows in the case of dimension or detail objects.)
Average	Calculates the average of the numbers in the column.
Min	Returns the smallest number in the column.
Max	Returns the largest number in the column.
Percentage	Displays each row's data as a percentage of the total. Web Intelligence adds an additional row to the table to hold the percentages.

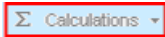
Inserting and removing calculations

You can insert predefined calculations into Web Intelligence reports. These predefined calculations allow you to perform standard business calculations on your data. For a list of available predefined calculations, see “[Available predefined calculations](#)” on page 187.

You add calculations from the toolbar or from the right-click menu.

To insert a calculation from the toolbar

1. Select the column to which you wish to add the calculation.
2. Display the **Report** toolbar by selecting **View** from the menu, then selecting **Toolbars**, then selecting **Report**.



3. Click the **Calculations** button on the toolbar to insert the default calculation (SUM).

Or

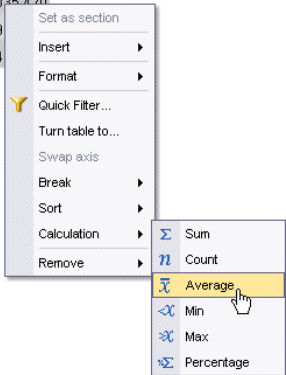
Click the arrow at the right of the calculation button, and then select the calculation you want from the list of predefined calculations.

Web Intelligence adds a footer to the column and places the calculation formula and result in it. (In the case of the PERCENTAGE calculation Web Intelligence adds an additional column to the table to hold the results of the calculation.)

To insert a calculation from the menu

1. Select a cell in the column to which you want to add a calculation.
2. Right-click, select **Calculation** then select the calculation from the sub menu.

Country	Resort	Revenue
France	French Riviera	835,420
US	Bahamas Beach	9
US	Hawaiian Club	1,4

A screenshot of a right-click context menu. The menu is open over the 'Revenue' column of the table. The 'Calculation' option is selected, and a sub-menu is displayed. The sub-menu contains the following options: Sum (with a sigma symbol), Count (with a list icon), Average (with a bar chart icon and a mouse cursor pointing to it), Min (with a less-than sign and a bar chart icon), Max (with a greater-than sign and a bar chart icon), and Percentage (with a sigma symbol and a bar chart icon). Other menu items visible in the main context menu include 'Set as section', 'Insert', 'Format', 'Quick Filter...', 'Turn table to...', 'Swap axis', 'Break', 'Sort', and 'Remove'.

The calculations that you have already added are marked in the menu. To remove a calculation that you added previously, select it again from the menu.

Creating Custom Calculations

Overview

Custom calculations allow you to add additional calculations to your report beyond its base objects and the standard calculations provided by Web Intelligence.

You add a custom calculation by writing a formula that Web Intelligence evaluates when you run the report. A formula can consist of base report variables, functions, operators and calculation contexts.

This chapter describes:

- [creating formulas](#)
- [functions](#)
- [operators](#)
- [defining calculation contexts in formulas](#)
- [examples of useful formulas](#)

Example: Showing average revenue per sale

If you have a report with Sales Revenue and Number Sold objects and you want to add revenue per sale to the report. The calculation

$$[\text{Sales Revenue}]/[\text{Number Sold}]$$

gives this value by dividing the revenue by the number of items sold in order to give the revenue per item.

A custom calculation is a formula that can consist of report objects, functions and operators. Formulas have a calculation context that you can specify explicitly if you choose.

For information on formulas, see [“Creating formulas”](#) on page 193. For information on operators, see [“Examples of useful formulas”](#) on page 218. For information on calculation contexts, see [“Defining the calculation context”](#) on page 198.

Creating formulas

This section describes the ways in which you can create formulas in your reports. You can add formulas in two ways:

- by typing the formula components into the Formula toolbar
- by using the Formula Editor to build the formula

The first way is more suitable for experienced users. If you are not familiar with formulas, you should use the Formula Editor to build them. The Formula Editor is an interface that allows you to select the different components of your formula (that is, operators, objects, and functions) and add them to it.

Using the Formula toolbar

You display the Formula toolbar by clicking **View > Toolbars > Formula** on the main menu. Now, when you select a cell, its formula appears in the Formula toolbar:



The Formula toolbar has the following buttons (from left to right):

Button	Description
Create a variable/ Edit a variable	Create New Variable/Edit variable dialog box. <ul style="list-style-type: none"> If the selected cell does not contain a variable or if there is no cell selected, the Create a variable button is displayed (shown in the toolbar on the left). If the selected cell contains a previously-created variable, the Edit variable button is displayed (shown in the toolbar on the right).
Formula Editor	Opens the Formula Editor
Validate formula	Verifies the formula syntax
Cancel formula	Clears the formula

Typing a formula into the Formula toolbar

Example: Calculating the average number of items sold

You have a report showing Year, Quarter, Sales Revenue and Quantity Sold and you want to add an additional column that shows the average revenue generated per item sold. The formula that gives this is:

$$=[\text{Sales Revenue}]/[\text{Quantity Sold}]$$

Entering a formula by typing

To enter a formula by typing:

1. Add an additional column to the right of the Quantity Sold column by selecting this column on the table, and then **Insert > New Column > Right** on the Report toolbar.

NOTE: To display the Report toolbar, click **View > Toolbars > Report** on the Main toolbar.

2. Display the Formula toolbar by clicking **View > Toolbars > Formula** on the Main toolbar.

3. In the Formula toolbar, type the formula, then click Enter.

For example, to calculate the average revenue generated per item sold, type:

`=[Sales Revenue]/[Quantity Sold]`

NOTE: Formulas always begin with '=' and report objects always appear inside square brackets in Web Intelligence formulas.

Using the Formula Editor

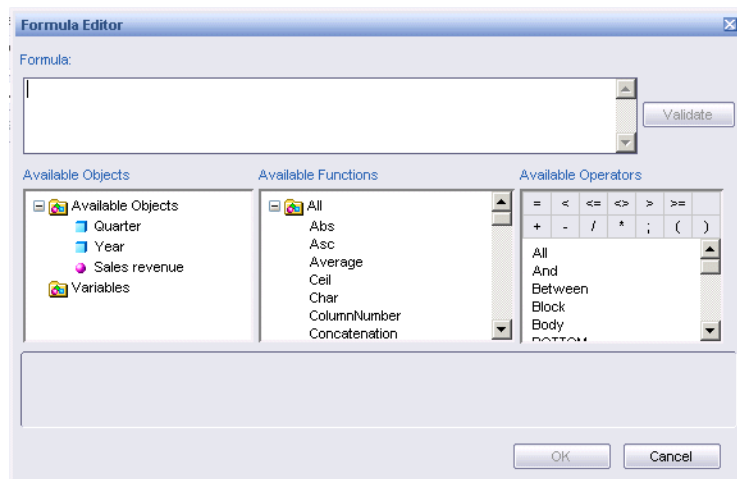
You can use the Formula Editor to enter formulas in the Formula toolbar. The Formula Editor is a graphical interface that you use to build formulas. It contains all report objects, functions and operators that you can use in a formula.

Displaying the Formula Editor

To display the Formula Editor:

- Click the **Formula Editor** button on the Formula toolbar.

The Formula Editor appears:



The Formula Editor shows the report objects, functions and operators that you can use to build a formula.

Building a formula using the Formula Editor

To build a formula, using the Formula Editor:

1. Select the cell on the report where you want to include the formula.
You can select a table cell or a free-standing cell.
2. Display the Formula toolbar by clicking **View > Toolbars > Formula** on the Main menu
3. Click the Formula Editor button on the Formula toolbar.
4. Build the formula by double-clicking objects, functions and operators to add them to the Formula box.

NOTE: When you add a function by double clicking, Web Intelligence places the cursor between the function parentheses to make it easier for you to continue building your formula. For example, to create the formula `Average([Revenue])`, double-click the `Average` function, then double-click the `Revenue` object.

Including text in cells

The text in report cells always begins with '='. Literal text appears in quotation marks, while formulas appear without quotation marks. For example, the formula `Average([Revenue])` appears in a cell as:

```
=Average([Revenue])
```

The text "Average Revenue" appears as:

```
= "Average Revenue"
```

You can use text alone in a cell, or mix formulas and text by using the '+' operator. If you want a cell to display the average revenue preceded by the text "Average Revenue", the cell text is as follows:

```
= "Average Revenue: " + Average([Revenue])
```

Note the space at the end of the text string so that the text and the value are not placed directly side-by-side in the cell.

Saving formulas as variables

You can save a formula as a variable in order to re-use it throughout a report. For information on how to do this, see "[Saving formulas as variables](#)" on page 221.

About functions

A custom calculation might consist of report objects only, for example

```
[Sales Revenue] / [Number of Sales]
```

However, calculations often include functions as well. A function is an operation that receives zero or more values as input and returns output based on those values. For example, the `Sum` function totals all the values in a measure and outputs the result. The formula `Sum([Sales Revenue])` outputs a total of sales revenues. In this case, the function input is the `Sales Revenue` measure and the output is the total of all `Sales Measures`.

To find out more about Web Intelligence functions, see “[What is a function?](#)” on page 229.

About operators

Operators link the various components in a formula. Formulas can contain five kinds of operators:

- Mathematical
- Conditional
- Logical
- Context
- Function-specific

You can see all the operators supported by Web Intelligence by clicking on the **Operators** tab in the Formula Editor.

The following sections describe each type of operator.

Mathematical operators

Mathematical operators are familiar from everyday arithmetic. There are addition (+), subtraction (-), multiplication (*), division (/) operators that allow you to perform mathematical operations in a formula. The formula:

[Sales Revenue] - [Cost of Sales]

contains a mathematical operator, in this case subtraction.

When used with character strings, the ‘+’ operator becomes a string concatenation operator. That is, it joins character strings. For example, the formula “John” + “ Smith” returns ‘John Smith’.

Conditional operators

Conditional operators determine the type of comparison to be made between values. The following table describes them:

Operator	Description
=	Equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to
!=	Not equal to

You use conditional operators in conjunction with If, as in:

```
If ([Revenue] >= 10000; 'High'; 'Low')
```

which returns “High” for all rows where the revenue is greater than or equal to 10000 and “Low” for all other rows.

Logical operators

Logical operators are used in expressions that return True or False. You use such expressions in the If function. The Web Intelligence logical operators are AND, OR, NOT, Between and InList. For example, the expression:

```
If ([Resort] = 'Bahamas Beach' OR [Resort]='Hawaiian Club'; 'US'; 'France')
```

returns “US” if the resort is “Bahamas Beach or “Hawaiian Club”, “France” otherwise.

The expression:

```
[Resort] = 'Bahamas Beach' OR [Resort]='Hawaiian Club'
```

returns True or False, True if the Resort variable is equal to ‘Bahamas Beach’ or ‘Hawaiian Club’, False otherwise.

Context operators

Context operators form part of extended calculation syntax. Extended syntax allows you to define which dimensions a measure or formula takes into account in a calculation. It is described in detail in the section “[Defining the calculation context](#)” on page 198.

Function-specific operators

Some Web Intelligence functions can take specific operators as arguments. For example, the Previous() function can take the SELF operator.

Defining the calculation context

Before you can define a specific calculation context, you need to understand how calculation contexts work.

What are calculation contexts?

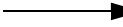
Calculation contexts give you more control over how a formula or measure is evaluated. To understand them, you need to be familiar with basic report concepts. A report contains two kinds of objects: dimensions, which are types of data about your business that can have measures associated with them (for example: products, years, states) and the measures that you can calculate in relation to dimensions (for example: sales revenue, number of sales). For example, a report could show sales revenue (measure) by year (dimension).

The important thing to remember about measures is that they are semantically dynamic. This means that the figures returned by a measure depend on the dimensions with which it is associated; in other words, on the context in which it is placed. Web Intelligence places

measures in default contexts depending on where they appear in a report. However, you can change these default contexts. This is what is meant by defining the calculation context.

You can see default contexts by creating a block containing Year and Sales Revenue objects. In this case the Sales Revenue object returns the revenue by year, because revenue is evaluated in the context of the Year dimension. If you then add the Quarter dimension to the block, the figures in the Sales Revenue column change because the default context is now year and quarter.

Year	Sales revenue
2001	\$8,096,124
2002	\$13,232,246
2003	\$15,059,143



Year	Quarter	Sales revenue
2001	Q1	\$2,660,700
2001	Q2	\$2,279,003
2001	Q3	\$1,367,841
2001	Q4	\$1,788,580
2002	Q1	\$3,326,172
2002	Q2	\$2,840,651
2002	Q3	\$2,879,303
2002	Q4	\$4,186,120
2003	Q1	\$3,742,989
2003	Q2	\$4,006,718
2003	Q3	\$3,953,395
2003	Q4	\$3,356,041

From this you can see that when you place a measure or formula in a block, the default calculation context that Web Intelligence applies includes all the dimensions in the block.

Default calculation contexts

Depending on where you place a measure or formula, Web Intelligence selects a default context. All the following examples use the **Sum()** function to illustrate default contexts.

Note: For more information on the terms input context and output context used in this section, see ["Modifying the default calculation context using extended syntax"](#) on page 203

Default contexts in a vertical table

A vertical table is a standard report table with headers at the top, data going from top to bottom and footers at the bottom. The default contexts in a down table are:

When the calculation is in the...	The input context is	The output context is
Header	The dimensions and measures used to generate the body of the block	All the data is aggregated then the calculation function returns a single value

When the calculation is in the...	The input context is	The output context is
Body of the block	The dimensions and measures used to generate the current row	The same as the input context
Footer	The dimensions and measures used to generate the body of the block	All the data is aggregated then the calculation function returns a single value

Example: Default contexts in a vertical table

The following table shows the default contexts in a vertical table:

Year	Quarter	Sales revenue	\$36387203
2001	Q1	\$2660700	\$2660699.50
2001	Q2	\$2278693	\$2278693.40
2001	Q3	\$1367841	\$1367840.70
2001	Q4	\$1788580	\$1788580.40
2002	Q1	\$3326172	\$3326172.20
2002	Q2	\$2840651	\$2840650.80
2002	Q3	\$2879303	\$2879303.00
2002	Q4	\$4186120	\$4186120.00
2003	Q1	\$3742989	\$3742988.90
2003	Q2	\$4006718	\$4006717.50
2003	Q3	\$3953395	\$3953395.30
2003	Q4	\$3356041	\$3356041.10
	Sum:	\$36387203	

Input context (Year, Quarter)
Values aggregated to single output

Input and output context (Year, Quarter)

Default context in a horizontal table

A horizontal table is like a vertical table turned on its side. Headers appear at the left, data goes left to right and footers appear at the right. The default contexts for a horizontal table are the same as those for a vertical table.

Default contexts in a crosstab

A crosstab displays data in a matrix with measures appearing at the intersections of dimensions. The default contexts in a crosstab are:

The calculation is in the...	The input context is...	The output context is...
Header	The dimensions and measures used to generate the body of the block.	All the data is aggregated, then the calculation function returns a single value.

The calculation is in the...	The input context is...	The output context is...
Body of the block	The dimensions and measures used to generate the body of the block.	The same as the input context.
Footer	The dimensions and measures used to generate the body of the block.	All the data is aggregated, then the calculation function returns a single value.
VBody footer	The dimensions and measures used to generate the current column.	All the data is aggregated, then the calculation function returns a single value.
HBody Footer	The dimensions and measures used to generate the current row.	All the data is aggregated, then the calculation function returns a single value.
VFooter	Same as footer.	All the data is aggregated, then the calculation function returns a single value.
HFooter	Same as footer.	All the data is aggregated, then the calculation function returns a single value.

Example: Default contexts in a crosstab

The report below shows the default contexts in a crosstab:

		FY2000 Q1	FY2000 Q2	FY2000 Q3	FY2000 Q4	
						1,115,730
France	259,170	61,895	76,555	70,080	50,640	259,170
US	856,560	196,831	189,886	234,574	235,269	856,560
Sum:	1,115,730	258,726	266,441	304,654	285,909	1,115,730

Default contexts in a section

A section consists of a header, body and footer. The default contexts in a section are:

The calculation is in the...	The input context is...	The output context is...
Body	The dimensions and measures in the report, filtered to restrict the data to the section data.	All the data is aggregated, then the calculation function returns a single value.

Example: Default contexts in a section

2001	8,096,123.6	Input context (Year, Quarter); data aggregated	
Quarter	Sales revenue		Section
Q1	\$2,660,700		8,096,123.6
Q2	\$2,279,003		8,096,123.6
Q3	\$1,367,841		8,096,123.6
Q4	\$1,788,580		8,096,123.6
Sum:	8,096,123.6		
2002	13,232,246		
Quarter	Sales revenue		Section
Q1	\$3,326,172		13,232,246
Q2	\$2,840,651		13,232,246
Q3	\$2,879,303		13,232,246
Q4	\$4,186,120		13,232,246
Sum:	13,232,246		
2003	15,059,142.8		
Quarter	Sales revenue	Section	
Q1	\$3,742,989	15,059,142.8	
Q2	\$4,006,718	15,059,142.8	
Q3	\$3,953,395	15,059,142.8	
Q4	\$3,356,041	15,059,142.8	
Sum:	15,059,142.8		

Default contexts in a break

A break consists of a header, body and footer. The default contexts in a break are:

The calculation is in the...	The input context is...	The output context is...
Header	Current instance of the break.	All the data is aggregated, then the calculation function returns a single value.
Footer	Current instance of the break.	All the data is aggregated, then the calculation function returns a single value.

Example: Default contexts in a break

Year	Quarter	\$8096123
	Q1	\$2660700
	Q2	\$2279003
	Q3	\$1367841
	Q4	\$1788580
2001		
	Sum:	\$8096124

Year	Quarter	\$13232246
	Q1	\$3326172
	Q2	\$2840651
	Q3	\$2879303
	Q4	\$4186120
2002		
	Sum:	\$13232246

Input context (Year, Quarter); data aggregated

Modifying the default calculation context using extended syntax

What if the default context of a formula or measure is not the context that you need? In this case, you can use extended syntax to tailor the context to the context you are looking for.

What is extended syntax?

Extended syntax uses context operators that you add to a formula or measure to specify its context. A measure or formula's context consists of its input context and output context.

What is an input context?

A formula's input context consists of the dimensions that feed into the formula.

Specifying dimensions in input and output contexts

Input and output contexts consist of lists of dimensions. These lists must always be enclosed in parentheses, even if the list contains only one dimension. For example, a context must be specified as ([Year];Quarter]) or ([Year]).

Example: Specifying an input context

In the examples given in “[What are calculation contexts?](#)” on page 198, the input contexts consist of (Year) and (Year, Quarter) respectively. That is, in the first example, Web Intelligence calculates revenue by year. In the second example it calculates revenue by year by quarter. When specified explicitly in a formula, the input context looks like this:

```
Sum ([Sales revenue] In ([Year];[Quarter]))
```

That is, the dimensions in the input context appear inside the parentheses of the function (in this case, Sum) whose input context you are specifying.

For an explanation of the In operator that appears in this formula, see “[The In context operator](#)” on page 208

What is an output context?

A formula’s output context causes the formula to output a value is if it were placed in the footer of a block containing a break. Think of an output context as a “break” in a formula.

Example: Specifying an output context

Look at the following report, which shows revenue by year and quarter, with a break on year, and the minimum revenue calculated by year.

Year	Quarter	Sales revenue
	Q1	\$2660699.50
	Q2	\$2279003.00
	Q3	\$1367840.70
	Q4	\$1788580.40
2001		
	Min:	\$1367840.70

Year	Quarter	Sales revenue
	Q1	\$3326172.20
	Q2	\$2840650.80
	Q3	\$2879303.00
	Q4	\$4186120.00
2002		
	Min:	\$2840650.80

Year	Quarter	Sales revenue
	Q1	\$3742988.90
	Q2	\$4006717.50
	Q3	\$3953395.30
	Q4	\$3356041.10
2003		
	Min:	\$3356041.10

What if you want to show the minimum revenue by year in a block with no break? You can do this by specifying the output context in a formula. In this case, the formula looks like this:

Min ([Revenue]) In ([Year])

That is, the output context appears after the parentheses of the function whose output context you are specifying. In this case, the output context tells Web Intelligence to calculate minimum revenue by year.

If you add an additional column containing this formula to the block, the result is as follows:

Year	Quarter	Sales revenue	Min by Year
2001	Q1	\$2660699.50	\$1367840.70
2001	Q2	\$2279003.00	\$1367840.70
2001	Q3	\$1367840.70	\$1367840.70
2001	Q4	\$1788580.40	\$1367840.70
2002	Q1	\$3326172.20	\$2840650.80
2002	Q2	\$2840650.80	\$2840650.80
2002	Q3	\$2879303.00	\$2840650.80
2002	Q4	\$4186120.00	\$2840650.80
2003	Q1	\$3742988.90	\$3356041.10
2003	Q2	\$4006717.50	\$3356041.10
2003	Q3	\$3953395.30	\$3356041.10
2003	Q4	\$3356041.10	\$3356041.10

You can see that the **Min By Year** column contains the minimum revenues that appear in the break footers in the previous report.

Notice that in this example, the input context is not specified because it is the default context (**Year, Quarter**) for the block. In other words, the output context tells Web Intelligence which revenue by year and quarter to output. In full, with both input and output formulas explicitly specified, the formula looks like this:

Min ([Sales Revenue] In([Year];[Quarter])) In ([Year])

Explained in words, this formula tells Web Intelligence to “calculate revenues by year by quarter, then output the smallest of these revenues that occurs in each year”.

What would happen if you did not specify the output context in the **Min by Year** column? In this case, these figures would be identical to the figures in the **Sales Revenue** column. Why? Remember that the default context in a block includes the dimensions in that block. The minimum revenue by year by quarter is the same as the revenue by year by quarter simply, because there is only one revenue for each year/quarter combination.

Specifying input and output contexts

You can specify both input and output contexts in the same formula.

Example: Specifying input and output contexts in the same formula

Look at the following table:

Year	Quarter	Month	Sales revenue	Min by Year
2001	Q1	1	\$1003541.20	\$1367840.70
2001	Q1	2	\$630073.20	\$1367840.70
2001	Q1	3	\$1027085.10	\$1367840.70
2001	Q2	4	\$895259.80	\$1367840.70
2001	Q2	5	\$865615.10	\$1367840.70
2001	Q2	6	\$517818.50	\$1367840.70
2001	Q3	7	\$525903.50	\$1367840.70
2001	Q3	8	\$173756.40	\$1367840.70
2001	Q3	9	\$668180.80	\$1367840.70
2001	Q4	10	\$655206.40	\$1367840.70
2001	Q4	11	\$484024.20	\$1367840.70
2001	Q4	12	\$649349.80	\$1367840.70
2002	Q1	1	\$1335401.90	\$2840650.80
2002	Q1	2	\$609012.80	\$2840650.80
2002	Q1	3	\$1381757.50	\$2840650.80
2002	Q2	4	\$1068308.90	\$2840650.80
2002	Q2	5	\$1081884.80	\$2840650.80
2002	Q2	6	\$690457.10	\$2840650.80
2002	Q3	7	\$801954.70	\$2840650.80
2002	Q3	8	\$581093.50	\$2840650.80
2002	Q3	9	\$1496254.80	\$2840650.80
2002	Q4	10	\$1545871.80	\$2840650.80
2002	Q4	11	\$1081915.30	\$2840650.80
2002	Q4	12	\$1558332.90	\$2840650.80

Notice that the figures in the **Min by Year** column are the same as those in the block footers in the example [“Specifying an output context”](#) on page 204, even though this block contains an additional dimension, **Month**. This is because the formula for **Min by Year** explicitly excludes **Month** from the input context. The formula looks like this:

Min ([Sales Revenue] In ([Year];[Quarter])) In ([Year])

This formula tells Web Intelligence to ignore month and calculate revenues by year and quarter (the input context), then output the smallest of these revenues for each year (the

output context). If you had not explicitly specified the input context, the table would look like this:

Year	Quarter	Month	Sales revenue	Min By Year
2001	Q1	1	\$1003541.20	\$173756.40
2001	Q1	2	\$630073.20	\$173756.40
2001	Q1	3	\$1027085.10	\$173756.40
2001	Q2	4	\$895259.80	\$173756.40
2001	Q2	5	\$865615.10	\$173756.40
2001	Q2	6	\$517818.50	\$173756.40
2001	Q3	7	\$525903.50	\$173756.40
2001	Q3	8	\$173756.40	\$173756.40
2001	Q3	9	\$668180.80	\$173756.40
2001	Q4	10	\$655206.40	\$173756.40
2001	Q4	11	\$484024.20	\$173756.40
2001	Q4	12	\$649349.80	\$173756.40
2002	Q1	1	\$1335401.90	\$581093.50
2002	Q1	2	\$609012.80	\$581093.50
2002	Q1	3	\$1381757.50	\$581093.50
2002	Q2	4	\$1068308.90	\$581093.50
2002	Q2	5	\$1081884.80	\$581093.50
2002	Q2	6	\$690457.10	\$581093.50
2002	Q3	7	\$801954.70	\$581093.50
2002	Q3	8	\$581093.50	\$581093.50
2002	Q3	9	\$1496254.80	\$581093.50
2002	Q4	10	\$1545871.80	\$581093.50
2002	Q4	11	\$1081915.30	\$581093.50
2002	Q4	12	\$1558332.90	\$581093.50

In this case, the input context is now (**Year, Quarter, Month**), so Web Intelligence calculates revenues by year, quarter and month before outputting the smallest revenue that occurs in the **Sales Revenue** column for each year. For example, 173,756.40 is the smallest value that appears in the **Sales Revenue** column in 2001, so this value appears in the **Min by Year** column in all rows where the year is 2001.

What would happen if you changed output context of the formula to (Year, Quarter)? The formula now calculates revenues by year, quarter and month (the input context), but the

formula's "break" occurs at each year/quarter change, rather than each year change. As a result, the block is as follows:

Year	Quarter	Month	Sales revenue	Min By Year, Quarter
2001	Q1	1	\$1003541.20	\$630073.20
2001	Q1	2	\$630073.20	\$630073.20
2001	Q1	3	\$1027085.10	\$630073.20
2001	Q2	4	\$895259.80	\$517818.50
2001	Q2	5	\$865615.10	\$517818.50
2001	Q2	6	\$517818.50	\$517818.50
2001	Q3	7	\$525903.50	\$173756.40
2001	Q3	8	\$173756.40	\$173756.40
2001	Q3	9	\$668180.80	\$173756.40
2001	Q4	10	\$655206.40	\$484024.20
2001	Q4	11	\$484024.20	\$484024.20
2001	Q4	12	\$649349.80	\$484024.20
2002	Q1	1	\$1335401.90	\$609012.80
2002	Q1	2	\$609012.80	\$609012.80
2002	Q1	3	\$1381757.50	\$609012.80
2002	Q2	4	\$1068308.90	\$690457.10
2002	Q2	5	\$1081884.80	\$690457.10
2002	Q2	6	\$690457.10	\$690457.10
2002	Q3	7	\$801954.70	\$581093.50
2002	Q3	8	\$581093.50	\$581093.50
2002	Q3	9	\$1496254.80	\$581093.50
2002	Q4	10	\$1545871.80	\$1081915.30
2002	Q4	11	\$1081915.30	\$1081915.30
2002	Q4	12	\$1558332.90	\$1081915.30

In words, this formula tells Web Intelligence to calculate revenues by year, quarter and month, then output the smallest of these revenues that occurs in each year/quarter combination".

Extended syntax context operators

In the examples so far, you specified input and output contexts by using the word **In**, then listing the dimensions to be included in the context. **In** is known as a context operator. The other context operators are **ForEach** and **ForAll**. The following table describes the context operators:

Operator	Definition
In	Used to specify dimensions explicitly. Also used with extended syntax keywords (see "Extended syntax keywords" on page 211)
ForEach	Adds dimensions to the context
ForAll	Removes dimensions from the context

The In context operator

The **In** context operator specified dimensions explicitly in a context.

Example: Using **In** to specify the dimensions in a context

In this example you have a report showing **Year** and **Sales Revenue**. Your data provider also contains the **Quarter** object but you do not include this dimension in the block. Instead, you want to include an additional column to show the maximum revenue by quarter in each year. Your report looks like this:

Year	Sales revenue	Max Quarterly Revenue
2001	\$8096123.60	\$2660699.50
2002	\$13232246.00	\$4186120.00
2003	\$15059142.80	\$4006717.50

You can see where the values in the **Max Quarterly Revenue** column come from by examining this block alongside a block that includes the **Quarter** dimension:

Year	Sales revenue	Max Quarterly Revenue
2001	\$8096123.60	\$2660699.50
2002	\$13232246.00	\$4186120.00
2003	\$15059142.80	\$4006717.50

Year	Quarter	Sales revenue
	Q1	\$2660700
	Q2	\$2279003
	Q3	\$1367841
	Q4	\$1788580
2001		
	Max:	2660699.5

Year	Quarter	Sales revenue
	Q1	\$3326172
	Q2	\$2840651
	Q3	\$2879303
	Q4	\$4186120
2002		
	Max:	4186120

Year	Quarter	Sales revenue
	Q1	\$3742989
	Q2	\$4006718
	Q3	\$3953395
	Q4	\$3356041
2003		
	Max:	4006717.5

The Max Quarterly Revenue column shows the highest quarterly revenue in each year. For example, Q4 has the highest revenue in 2002, so the **Max Quarterly Revenue** shows Q4 revenue on the row showing 2002.

Using the In operator, the formula for Max Quarterly Revenue is

```
Max ([Sales Revenue] In ([Year];[Quarter])) In ([Year]).
```

This formula tells Web Intelligence to calculate the maximum sales revenue for each (Year,Quarter) combination, then output this figure by year.

Note: Because the default output context of the block is **Year**, you do not need to specify the output context explicitly in this formula.

The ForEach context operator

The ForEach operator adds dimensions to a context.

Example: Using ForEach to add dimensions to a context

In the example “Using In to specify the dimensions in a context” on page 208 you used the formula:

```
Max ([Sales Revenue] In ([Year];[Quarter])) In ([Year])
```

to calculate the maximum revenue by year and quarter in the table, below, which does not show the **Quarter** dimension:

Year	Sales revenue	Max Quarterly Revenue
2001	\$8096123.60	\$2660699.50
2002	\$13232246.00	\$4186120.00
2003	\$15059142.80	\$4006717.50

Using the **ForEach** context operator, you can achieve the same result with the formula:

```
Max ([Sales Revenue] ForEach ([Quarter])) In ([Year])
```

Why? Because the **Year** dimension is the default input context in the block (see “Default calculation contexts” on page 199 for more information on default contexts). By using the **ForEach** operator, you add the **Quarter** dimension to the context, giving an input context of ([Year];[Quarter]).

The ForAll context operator

The ForAll context operator removes dimensions from a context.

Example: Using ForAll to remove dimensions from a context

You have a report showing **Year**, **Quarter** and **Sales Revenue** and you want to add a column that shows the total revenue in each year, as shown in the following block:

Year	Quarter	Sales revenue	Yearly Total
2001	Q1	\$2660700	\$8096124
2001	Q2	\$2279003	\$8096124
2001	Q3	\$1367841	\$8096124
2001	Q4	\$1788580	\$8096124
2002	Q1	\$3326172	\$13232246
2002	Q2	\$2840651	\$13232246
2002	Q3	\$2879303	\$13232246
2002	Q4	\$4186120	\$13232246
2003	Q1	\$3742989	\$15059143
2003	Q2	\$4006718	\$15059143
2003	Q3	\$3953395	\$15059143
2003	Q4	\$3356041	\$15059143

To total revenues by year the input context needs to be (Year); by default it is

(Year; Quarter). Therefore, you can remove **Quarter** from the input context by specifying ForAll ([Quarter]) in the formula, which looks like this:

```
Sum([Sales Revenue] ForAll ([Quarter]))
```

Note that you can use the **In** operator to achieve the same thing; in this case the formula is:

```
Sum([Sales Revenue] In ([Year]))
```

This version of the formula explicitly specifies **Year** as the context, rather than removing **Quarter** to leave **Year**.

The **ForAll** and **ForEach** operators are useful when you have a default context with many dimensions. It is often easier to “add” or “subtract” from the context using **ForAll** and **ForEach** than it is to specify the list explicitly using In.

Extended syntax keywords

Extended syntax keywords are a form of “shorthand” that allows you to refer to dimensions in extended syntax without specifying those dimensions explicitly. This helps future-proof reports; if formulas do not contain hard-coded references to dimensions, they will continue to work even if dimensions are added to or removed from a report.

There are five extended syntax keywords: **Report**, **Section**, **Break**, **Block** and **Body**.

The following sections describe each keyword, with an example to illustrate each. The section “[Using keywords to make reports generic](#)” on page 216 illustrates the way in which the use of keywords makes reports generic.

The Report keyword

The following table describes the data referenced by the **Report** keyword depending on where it is placed in a report:

When placed in...	References this data...
A block	All data in the report
A block break (header or footer)	All data in the report
A section (header, footer, or outside a block)	All data in the report
Outside any blocks or sections in the report	All data in the report

Example: The Report keyword

You have a report showing **Year**, **Quarter** and **Sales revenue**. The report has a column, **Report Total**, that shows the total of all revenue in the report.

Year	Quarter	Sales revenue	Report Total
2001	Q1	\$2,660,700	36,387,512.4
2001	Q2	\$2,279,003	36,387,512.4
2001	Q3	\$1,367,841	36,387,512.4
2001	Q4	\$1,788,580	36,387,512.4
2002	Q1	\$3,326,172	36,387,512.4
2002	Q2	\$2,840,651	36,387,512.4
2002	Q3	\$2,879,303	36,387,512.4
2002	Q4	\$4,186,120	36,387,512.4
2003	Q1	\$3,742,989	36,387,512.4
2003	Q2	\$4,006,718	36,387,512.4
2003	Q3	\$3,953,395	36,387,512.4
2003	Q4	\$3,356,041	36,387,512.4

The formula for the Report Total column is Sum([Sales revenue]) In Report. Without the Report keyword, this column would duplicate the figures in the **Sales Revenue** column because it would use the default output context ([Year];[Quarter]). For more information on default contexts, see ["Default calculation contexts"](#) on page 199.

The Section keyword

The following table describes the data referenced by the **Section** keyword depending on where it is placed in a report

When placed in...	References this data...
A block	All data in the section
A block break (header or footer)	All data in the section
A section	All data in the section
Outside any blocks or sections	Not applicable

Example: The Section keyword

You have a report showing **Year**, **Quarter**, and **Sales revenue**. The report has a section based on **Year**. The **Section Total** column has the formula:

Sum ([Sales Revenue]) In Section

2001		
Quarter	Sales revenue	Section Total
Q1	\$2,660,700	8,095,814
Q2	\$2,278,693	8,095,814
Q3	\$1,367,841	8,095,814
Q4	\$1,788,580	8,095,814

The figure in the **Section Total** column is the total revenue for 2001, because the section break occurs on the **Year** object. Without the **Section** keyword this column would duplicate the figures in the **Sales revenue** column, because it would use the default output context ([Year];[Quarter]).

For more information on default contexts, see “[Default calculation contexts](#)” on page 199.

The Break keyword

The following table describes the dimensions referenced by the **Break** keyword depending on where it is placed in a report:

When placed in...	References this data...
A block	Data in the part of a block delimited by a break.
A block break (header or footer)	Data in the part of a block delimited by a break.
A section (header, footer, or outside a block)	Not applicable.
Outside any blocks or sections in the report	Not applicable.

Example: The Break keyword

You have a report showing **Year**, **Quarter** and **Sales revenue**. The report has break on Year. The **Break Total** column has the formula:

Sum ([Sales Revenue]) In Break

Year	Quarter	Sales revenue	Break Total
2001	Q1	\$2,660,700	8,096,123.6
	Q2	\$2,279,003	8,096,123.6
	Q3	\$1,367,841	8,096,123.6
	Q4	\$1,788,580	8,096,123.6
2001			

Without the **Break** keyword this column would duplicate the figures in the **Sales revenue** column, because it would use the default output context ([Year];[Quarter]).

For more information on default contexts, see “[Default calculation contexts](#)” on page 199.

The Block keyword

The following table describes the dimensions referenced by the **Block** keyword depending on where it is placed in a report: The **Block** keyword often encompasses the same data as the **Section** keyword. One difference is that **Block** accounts for filters on a block whereas

When placed in...	References this data...
A block	Data in the whole block, ignoring breaks, respecting filters
A block break (header or footer)	Data in the whole block, ignoring breaks, respecting filters
A section (header, footer, or outside a block)	Not applicable
Outside any blocks or sections	Not applicable

Section ignores them.

Example: The Block keyword

You have a report showing **Year**, **Quarter** and **Sales revenue**. The report has a section based on **Year**. The block is filtered to exclude the third and fourth quarters. The **Yearly Average** column has the formula:

Average([Sales revenue] In Section)

and the **First Half Average** column has the formula Average ([Sales revenue]) In Block. You can see how the **Block** keyword takes account of the filter on the block.

2001

Quarter	Sales revenue	First Half Average	Yearly Average
Q1	\$2,660,700	\$2,469,851.25	\$8,096,123.60
Q2	\$2,279,003	\$2,469,851.25	\$8,096,123.60
Sum:	4,939,702.5		

2002

Quarter	Sales revenue	First Half Average	Yearly Average
Q1	\$3,326,172	\$3,083,411.50	\$13,232,246.00
Q2	\$2,840,651	\$3,083,411.50	\$13,232,246.00
Sum:	6,166,823		

2003

Quarter	Sales revenue	First Half Average	Yearly Average
Q1	\$3,742,989	\$3,874,853.20	\$15,059,142.80
Q2	\$4,006,718	\$3,874,853.20	\$15,059,142.80
Sum:	7,749,706.4		

The Body keyword

The following table describes the dimensions referenced by the **Body** keyword depending on where it is placed in a report:

When placed in...	References this data...
A block	Data in the block
A block break (header or footer)	Data in the block
A section (header, footer, or outside a block)	Data in the section
Outside any blocks or sections	Data in the report

Example: The **Body** keyword

You have a report showing **Year**, **Quarter** and **Sales revenue**, with a break on **Year**. The report has a section based on **Year** and a break on **Quarter**. The **Body** column has the formula Sum ([Sales Revenue]) In Body.

Year	Quarter	Sales revenue	Body
2001	Q1	\$2,660,700	2,660,699.5
	Q2	\$2,279,003	2,279,003
	Q3	\$1,367,841	1,367,840.7
	Q4	\$1,788,580	1,788,580.4
2001		8,096,123.6	

— The Body keyword gives a different result depending on where it is placed

The totals in the **Body** column are the same as those in the **Sales revenue** column because the **Body** keyword refers to the data in the block. If you were to remove the **Month** object, the figures in the **Block** column would change to correspond with the changed figures in the **Sales revenue** column. If you were to place the formula in the report footer it would return the total revenue for the block.

Using keywords to make reports generic

Extended keywords future-proof your report against changes. If you refer to data explicitly (by specifying dimensions using **In**, **ForEach** or **ForAll**) your reports might return unexpected data if dimensions are added or removed. The following example illustrates this.

Example: Using the Report keyword to display percentages

In this example you have a block that contains **Year**, **Quarter** and **Sales revenue** objects. You want to display revenues by year and quarter, and the percentage of the total revenue in the report that each individual revenue represents, as shown:

Year	Quarter	Sales revenue	Percentage of Total
2001	Q1	\$2660700	7.31
2001	Q2	\$2279003	6.26
2001	Q3	\$1367841	3.76
2001	Q4	\$1788580	4.92
2002	Q1	\$3326172	9.14
2002	Q2	\$2840651	7.81
2002	Q3	\$2879303	7.91
2002	Q4	\$4186120	11.5
2003	Q1	\$3742989	10.29
2003	Q2	\$4006718	11.01
2003	Q3	\$3953395	10.86
2003	Q4	\$3356041	9.22
		Sum:	100

The formula for the **Percentage of Total** column is:

$$([\text{Sales revenue}]/(\text{Sum}([\text{Sales revenue}] \text{ In Report})) * 100$$

Remember that, in a block, the **Report** includes all data in a report, so this formula could be written:

$$([\text{Sales revenue}]/\text{Sum}([\text{Sales revenue}] \text{ ForAll } ([\text{Year}];[\text{Quarter}]))) * 100$$

$$\text{Sum}([\text{Sales revenue}] \text{ ForAll } ([\text{Year}],[\text{Quarter}]$$

tells Web Intelligence to remove **Year** and **Quarter** from the output context; in other words, to calculate a grand total, because there are no other dimensions in the report. (See “[The ForAll context operator](#)” on page 210 for an explanation of ForAll.) The formula then divides each revenue by the grand total to give its percentage of the total.

Although you can use **ForAll** in this situation, it is much better to use the **Report** keyword. Why? What if the **Month** dimension were subsequently added to the report? The version of the formula that uses the **Report** keyword still calculates each percentage correctly, but the version that explicitly specifies the **Year** and **Quarter** dimensions is now wrong:

Year	Quarter	Month	Sales revenue	Percentage of Total
2001	Q1	1	\$1003541.20	26.13
2001	Q1	2	\$630073.20	29.97
2001	Q1	3	\$1027085.10	27.12
2001	Q2	4	\$895259.80	28.1
2001	Q2	5	\$865615.10	24.3
2001	Q2	6	\$517818.50	21.77
2001	Q3	7	\$525903.50	20.42
2001	Q3	8	\$173756.40	11.11
2001	Q3	9	\$668180.80	16.45
2001	Q4	10	\$655206.40	18.04
2001	Q4	11	\$484024.20	18.55
2001	Q4	12	\$649349.80	21.01
2002	Q1	1	\$1335401.90	34.77
2002	Q1	2	\$609012.80	28.97
2002	Q1	3	\$1381757.50	36.49
2002	Q2	4	\$1068308.90	33.53
2002	Q2	5	\$1081884.80	30.38
2002	Q2	6	\$690457.10	29.03
2002	Q3	7	\$801954.70	31.14
2002	Q3	8	\$581093.50	37.15
2002	Q3	9	\$1496254.80	36.84
2002	Q4	10	\$1545871.80	42.57
2002	Q4	11	\$1081915.30	41.47
2002	Q4	12	\$1558332.90	50.43
2003	Q1	1	\$1501366.70	39.09
2003	Q1	2	\$863451.90	41.07
2003	Q1	3	\$1378170.30	36.39
2003	Q2	4	\$1222329.40	38.37
2003	Q2	5	\$1614147.30	45.32
2003	Q2	6	\$1170240.80	49.2
2003	Q3	7	\$1247313.50	48.44
2003	Q3	8	\$809365.40	51.74
2003	Q3	9	\$1896716.40	46.7
2003	Q4	10	\$1430300.10	39.39
2003	Q4	11	\$1043098.80	39.98
2003	Q4	12	\$882642.20	28.56
			Sum:	1200

Why is this? The problem lies in:

Sum ([Sales Revenue] ForAll ([Year];[Quarter]))

When **Year** and **Quarter** were the only dimensions in the report, this was equivalent to “a grand total of all revenues”. Once you add the **Month** dimension, this expression removes **Year** and **Quarter** from the default output context, but leaves Month.

The formula now has a “break” on month. In other words, on every row where Month is 1, this expression now means “the total revenue of all month 1s”. In every row where Month

is 2, it means “the total revenue of all month 2s”. As a result, the percentages are not the percentages you expect.

Examples of useful formulas

Example: Calculating a percentage using the Percentage function

Web Intelligence has the **Percentage** function for calculating percentages. This function calculates the percentage of a number in relation to its surrounding context. For example, the following table shows revenues by year and quarter. The percentage column contains the formula:

Percentage ([Sales Revenue])

Year	Quarter	Sales revenue	Percentage
2001	Q1	\$2660700	0.07
2001	Q2	\$2279003	0.06
2001	Q3	\$1367841	0.04
2001	Q4	\$1788580	0.05
2002	Q1	\$3326172	0.09
2002	Q2	\$2840651	0.08
2002	Q3	\$2879303	0.08
2002	Q4	\$4186120	0.12
2003	Q1	\$3742989	0.1
2003	Q2	\$4006718	0.11
2003	Q3	\$3953395	0.11
2003	Q4	\$3356041	0.09
		Sum:	1

In this case the function calculates each revenue as a percentage of the total revenue. The surrounding context is the total revenue; this is the only revenue figure that is relevant outside the breakdown by year and quarter in the table.

If the report is split into sections by year, the surrounding context outside the table becomes the total revenue in the section.

2001

Year	Quarter	Sales revenue	Percentage
2001	Q1	\$2660700	0.33
2001	Q2	\$2279003	0.28
2001	Q3	\$1367841	0.17
2001	Q4	\$1788580	0.22
		Sum:	1

If the **Percentage** cell is placed outside the table but still inside the section, the surrounding context becomes the total revenue. In this case the **Percentage** function calculates the total revenue for the section as a percentage of the total overall revenue.

2001	0.22
------	------

Year	Quarter	Sales revenue
2001	Q1	\$2660700
2001	Q2	\$2279003
2001	Q3	\$1367841
2001	Q4	\$1788580

2002	0.36
------	------

Year	Quarter	Sales revenue
2002	Q1	\$3326172
2002	Q2	\$2840651
2002	Q3	\$2879303
2002	Q4	\$4186120

Example: Calculating a percentage using the Sum function

You can gain more control over the context in which a percentage is calculated by using the Sum function. If you divide one figure in a set of figures by the total of those figures, you get its percentage of the total; for example, the formula $[\text{Sales Revenue}]/\text{Sum}([\text{Sales Revenue}])$ gives the sales revenue as a percentage of the total revenue.

In the following table the Percentage of Total column has the formula:

$[\text{Sales revenue}]/(\text{Sum}([\text{Sales revenue}] \text{ In Report}))$ and the Percentage of Year column has the formula:

$[\text{Sales revenue}]/(\text{Sum}([\text{Sales revenue}] \text{ In Section}))$.

These formulas take advantage of the extended syntax keywords **Report** and **Section** to instruct the **Sum** function to calculate the overall total revenue and yearly revenue respectively.

2001

Year	Quarter	Sales revenue	Percentage of Total	Percentage of Year
2001	Q1	\$2660700	0.07	0.33
2001	Q2	\$2279003	0.06	0.28
2001	Q3	\$1367841	0.04	0.17
2001	Q4	\$1788580	0.05	0.22

For more details on the extended syntax that you can use with functions, including the **Report** and **Section** keywords, see ["Defining the calculation context"](#) on page 198.

Example: Showing prompt input with UserResponse()

You have a report showing **Year**, **Quarter** and **Sales revenue**. The **State** object also appears in the report data, although it is not displayed. When the user runs the report they are presented with a prompt and they must choose a state. You want to show the state that they have chosen in the report title. If your data provider is called "eFashion" and the text in the prompt is "Choose a State", the formula for the title is:

"Quarterly Revenues for " + UserResponse("eFashion";"Choose a State")

The report is as follows:

Quarterly Revenues for Illinois
--

Year	Quarter	Sales revenue
2001	Q1	\$256,454
	Q2	\$241,458
	Q3	\$107,006
	Q4	\$133,306
2001	Total	\$738,223.80

Year	Quarter	Sales revenue
2002	Q1	\$334,297
	Q2	\$254,722
	Q3	\$230,573
	Q4	\$331,067
2002	Total	\$1,150,658.80

Year	Quarter	Sales revenue
2003	Q1	\$255,658
	Q2	\$354,724
	Q3	\$273,186
	Q4	\$250,517
2003	Total	\$1,134,085.40

Saving formulas as variables

Overview

"[Creating Custom Calculations](#)" on page 193 describes Web Intelligence custom calculations and using formulas as part of calculations. You can create formulas directly in a report cell, but it is often better to save a formula as a variable. By saving a formula as a variable you can reuse it throughout the reports in a document without the need to continually retype it.

This chapter shows you how to save formulas as variables and use them in reports. It contains the following sections:

- [Creating, editing, and deleting variables](#)
- [Using variables to simplify formulas](#)

Creating, editing, and deleting variables

"[Creating Custom Calculations](#)" on page 193 describes how you can create custom calculations beyond the simple calculations provided by Web Intelligence. Calculations are formulas that can include base report objects and functions. Web Intelligence allows you to save a formula as a variable; a variable is simply a named formula. Saving formulas as variables has the advantages of:

- allowing you to re-use a formula in a report without the need to re-create it each time
- simplifying complex formulas by breaking them down into variables

Example: Showing the amount of revenue generated per guest

You have a report that contains [Revenue] and [Number of Guests] objects. The formula:

$$[\text{Revenue}] / [\text{Number of Guests}]$$

gives the average revenue per guest. If you save this formula as a variable called Average Revenue, you can re-use it throughout a report.

Creating formulas

Variables and formulas are closely linked because variables are named formulas. To find out how to create a formula, see "[Creating formulas](#)" on page 193.

Saving formulas as variables

You save a formula as a variable with the Create New Variable dialog box.

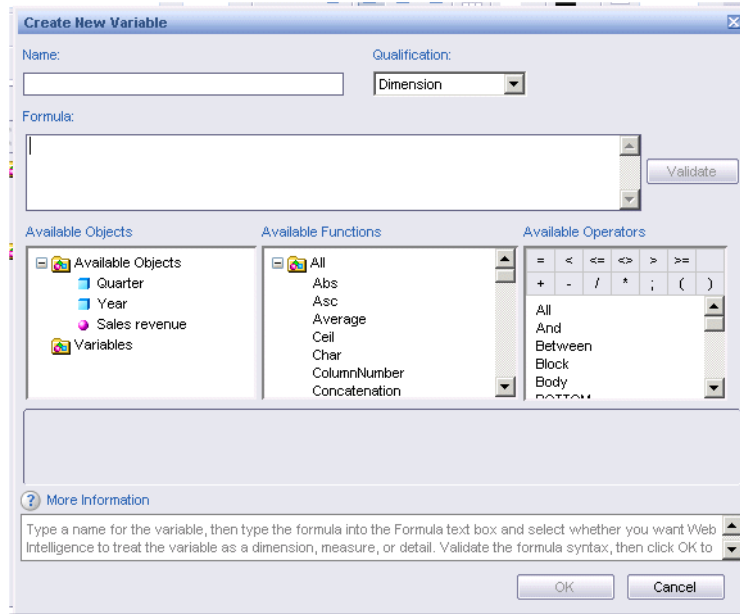
Creating a variable using the Create New Variable dialog box

To create a variable using the Create New Variable dialog box:

1. Select the cell where you want to create the variable, or make sure that no cell is selected.
2. Click **Create a variable**.

The Create Variable dialog box appears.

If you had selected a cell, the current cell formula appears in the **Formula** box. If not,



the **Formula** box is blank.

NOTE: The **Create a variable** button is available on the Formula toolbar when you select a cell that does not already contain a variable or when no cell is selected.

3. Type the variable name in the **Name** box.
4. Select the variable type by selecting **Dimension**, **Measure** or **Detail**.

The following table describes the differences between these variable types:

Table 0.1:

Object	Description
Dimension	Retrieves the data that will provide the basis for analysis in a report. Dimension objects typically retrieve character-type data, for example; customer names, line names, or dates.

Table 0.1:

Object	Description
Detail	Provides descriptive data about a dimension. A detail is always attached to the dimension for which it provides additional information. For example, Age is a detail object that is associated with Customer dimension. Address provides additional information on customers.
Measure	Retrieves numeric data that is the result of calculations on data in the database. For example; Revenue is the calculation of the number of items sold multiplied by item price. Measure objects are often located in a Measures class.

If you select **Detail**, an **Associated Dimension** box appears. Click ... next to the box to open the Objects and Variables dialog box and select the dimension you want to associate with the detail.

For more information on associating details with dimensions, see "[Associating details with dimensions](#)" on page 223.

1. Create the variable formula in the **Formula** box by typing or double-clicking objects, functions and operators.

NOTE: If you selected a cell that already contained a formula, the cell formula appears in the **Formula** box.

2. Click **OK**.

The variable appears in the list of report variables. in the Left Pane under the Variables folder.

You can now use the variable in your report just as you do with ordinary report objects.

Associating details with dimensions

A detail object is an object that provides additional information about a dimension. For example, if you have a Customer and Customer Name objects, you can associate Customer Name as a detail of Customer. Web Intelligence requires a one-to-one relationship between a dimension and its associated detail(s), but Desktop Intelligence documents allow a one-to-many relationship.

If a detail contains more than one value for one value of the dimension (which might be the case in a document migrated from Desktop Intelligence), it returns the #MULTIVALUE error when placed in the same block as the dimension.

You can remove the #MULTIVALUE error by activating the **Avoid Duplicate Row Aggregation** block property. For more information, see [“Avoiding duplicate rows”](#) on page 121.

Editing and deleting variables

After you have created a variable you can edit it or delete it.

Editing a variable

To edit a variable:

1. Select the variable in the list of report variables under Available Objects in the Left Pane.
2. Click the right mouse button and click **Edit** on the shortcut menu, or click **Edit** at the top of the Left Pane.
The Edit Variable dialog box appears.
3. Edit the variable.
4. Click **Validate** to check the syntax of the updated variable.
5. Click **OK** to save the new variable definition.
The variable is saved in the document. You can include the variable in any of the reports within the same document.

Deleting a variable

To delete a variable:

1. Select the variable in the list of report variables under Available Objects on the Left Pane.
2. Click the right mouse button and click **Remove** on the shortcut menu or click **Remove** at the top of the Left Pane.

Using variables to simplify formulas

If a formula is complex you can use variables to simplify it. By using variables you break a complex formula down into manageable parts and make it much easier to read, as well as making building formulas much less error-prone.

You can use previously-created variables in a formula in exactly the same way as you use other report objects. Variables appear in the formula editor under the “Variables” folder.

Example: Create a formula to return a statistical variance

Variance is a statistical term. The variance of a set of values measures the spread of those values around their average. Web Intelligence has the function `Var()` that calculates the variance in one step, but manual calculation of variance provides a good example of how to simplify a complex formula using variables.

You have a report showing numbers of items sold by quarter and you want to include the variance. To calculate the variance manually you need to:

- calculate the average number of items sold

- calculate the difference between each number of items sold and the average, then square this value
- add up all these squared differences
- divide this total by the number of values - 1

Without the use of variables to simplify it, this formula is as follows:

`Sum((((Quantity sold] - Average([Quantity sold] ForEach [Quarter]) In Report)*([Quantity sold] - Average([Quantity sold] ForEach [Quarter]) In Report)) In [Quarter])/(Count ([Quantity sold] ForEach [Quarter]) - 1)`

This formula is clearly unwieldy. By using variables you can simplify it to:

`Sum ([Difference Squared])/[Number of Observations] - 1)`

which is much easier to understand. This simplified version of the formula gives you a high-level view of what the formula is doing, rather than plunging you into the confusing details. You can then examine the formulas of the variables referenced in the high-level formula to understand its component parts.

For example, the formula references the variable `Difference Squared`, which itself references the variable `Average Sold`. By examining the formulas of `Difference Squared` and `Average sold`, you can drill down into the formula to understand the details of what it is doing.

Simplifying a variance formula with variables

As the example above shows, there are several steps involved in creating a variance formula. You encapsulate each of these steps in a variable. The variables you create are:

- average number of items sold
- number of observations (that is, the number of separate values of the number of items sold)
- difference between an observation and the average, squared
- sum of these differences divided by the number of observations - 1

In this example, your initial report looks like this:

Q1	61,808
Q2	54,406
Q3	55,690
Q4	51,325

Creating an `Average Sold` variable

To create an Average Sold variable:

1. Display the Formula toolbar by clicking **View > Toolbars > Formula** on the Main toolbar.
2. Make sure that no cell is selected.
3. Click **Create a variable** on the Formula toolbar.
4. In the **Formula** pane, type the formula:

```
Average([Quantity Sold] In ([Quarter])) In Report  
Or
```

Double-click items in the **Available Objects**, **Available Functions** and **Available Operators** boxes to build the formula.

5. Set the formula qualification to **Measure**.
6. In the **Name** text box, type:

```
Average Sold
```

7. Click **OK**.

Creating a Number of Observations variable

1. Display the Formula toolbar by clicking **View > Toolbars > Formula** on the Main toolbar.
2. Make sure that no cell is selected.
3. Click **Create a variable** on the Formula toolbar.
4. In the **Formula** pane, type the formula:

```
Count([Quantity Sold] In ([Quarter])) In Report  
Or
```

Double-click items in the **Available Objects**, **Available Functions** and **Available Operators** boxes to build the formula.

5. Set the formula qualification to **Measure**.
6. In the **Name** text box, type:

```
Average Sold
```

7. Click **OK**.

Creating a Difference Squared variable

1. Display the Formula toolbar by clicking **View > Toolbars > Formula** on the Main toolbar.
2. Make sure that no cell is selected.
3. Click **Create a variable** on the Formula toolbar.
4. In the **Formula** pane, type the formula:

```
Power(([Quantity sold] - [Average Sold]);2)  
Or
```

Double-click items in the **Available Objects**, **Available Functions** and **Available Operators** boxes to build the formula.

5. Set the formula qualification to **Measure**.

6. In the **Name** text box, type:
Average Sold:
7. In the **Name** text box, type:
Difference Squared
8. Click **OK**.

Creating the Variance variable

1. Display the Formula toolbar by clicking **View > Toolbars > Formula** on the Main toolbar.
2. Make sure that no cell is selected.
3. Click **Create a variable** on the Formula toolbar.
4. In the **Formula** pane, type the formula:

```
Sum([Difference Squared] In ([Quarter]))/([Number of Observations] - 1)
```

Or

Double-click items on the **Available Objects**, **Available Functions** and **Available Operators** boxes to build the formula.
5. Set the formula qualification to **Measure**.
6. In the **Name** text box, type:
Average Sold:
7. In the **Name** text box, type:
Difference Squared
8. Click **OK**.

Adding the variance to the report

To add the variance to the report:

1. Select the **Variance** variable under Available Objects on the Left Pane, and then drop the variable onto the report.

Using Web Intelligence functions

Overview

This chapter looks at the functions available in Web Intelligence. You often use functions when creating Web Intelligence custom calculations.

This chapter covers the following topics:

- [what is a function?](#)
- [using functions](#)
- [function examples and descriptions](#)

What is a function?

In mathematics, a function is a rule relating different values or sets of values. Functions describe the relationships between variables and allow you to determine the value of one variable given the value of another variable or variables. A function prototype (see below) is a description of the relationship between input value(s) and output values and allows you to derive a value (the output value) given zero or more existing values (the input value or values). You input values to a function through its parameters and the function returns a value related to the values of the parameters.

For example, the `Left()` function describes the relationship between two input values (a character string and an integer) and a character string output value. It outputs the first [integer] characters of this character string as another character string. If the input string is 'Hello' and the input integer is 2, the output string is therefore 'He'.

Note: Not all functions require input parameters.

Function prototypes

To use a function you need to know its name, how many input values it requires and the data types of these input values. You also need to know the type of data that the function outputs. For example, the `Sum` function takes a numerical object as input (for example a measure showing sales revenue) and outputs numeric data (the sum of all the values of the measure object).

This description of a function's inputs and outputs is known as its prototype. The prototypes of all Web Intelligence functions are listed in "[Functions available in Web Intelligence](#)" on page 233.

Using functions

Often you need to build additional calculations or objects into a report beyond the report's base objects or calculations. In some cases existing report objects are sufficient to create these additional objects or calculations. For example, if you have Revenue and Number of Sales objects you can create the formula

[Revenue]/[Number of Sales]

to show the revenue per sale.

More often you need to use functions to provide the additional calculations and objects you need. Web Intelligence has several categories of functions:

Category	Description
All	All the functions for all the categories listed below in this table.
Aggregate	Aggregates data (for example by summing or averaging a set of values)
Character	Manipulates character strings
Date and Time	Returns date or time data
Document	Returns data about a document
Data Provider	Returns data about a document's data provider
Logical	Returns TRUE or FALSE.
Numeric	Returns numeric data
Misc	Functions that do not fit into the above categories

You can see a full list of the functions available in Web Intelligence, see "[Functions available in Web Intelligence](#)" on page 233

Function examples and descriptions

This section shows how to use some of the functions available with Web Intelligence to answer typical business questions. Later in this section, you will find a detailed description of each function and gives an example of the information each function enables you to include in reports.

Example: Calculating a percentage using the Percentage function

Web Intelligence has the Percentage function for calculating percentages. This function calculates the percentage of a number in relation to its surrounding context. For example,

the following table shows revenues by year and quarter. The percentage column contains the formula

Percentage ([Sales Revenue])

Year	Quarter	Sales revenue	Percentage
2001	Q1	\$2660700	0.07
2001	Q2	\$2279003	0.06
2001	Q3	\$1367841	0.04
2001	Q4	\$1788580	0.05
2002	Q1	\$3326172	0.09
2002	Q2	\$2840651	0.08
2002	Q3	\$2879303	0.08
2002	Q4	\$4186120	0.12
2003	Q1	\$3742989	0.1
2003	Q2	\$4006718	0.11
2003	Q3	\$3953395	0.11
2003	Q4	\$3356041	0.09
		Sum:	1

In this case the function calculates each revenue as a percentage of the total revenue. The surrounding context is in this case the total revenue; this is the only revenue figure that is relevant outside the breakdown by year and quarter in the table.

If the report is split into sections by year, the surrounding context outside the table becomes the total revenue in the section.

2001

Year	Quarter	Sales revenue	Percentage
2001	Q1	\$2660700	0.33
2001	Q2	\$2279003	0.28
2001	Q3	\$1367841	0.17
2001	Q4	\$1788580	0.22
		Sum:	1

If the Percentage cell is placed outside the table but still inside the section, the surrounding context becomes the total revenue. In this case the Percentage function calculates the total revenue for the section as a percentage of the total overall revenue.

2001	0.22
------	------

Year	Quarter	Sales revenue
2001	Q1	\$2660700
2001	Q2	\$2279003
2001	Q3	\$1367841
2001	Q4	\$1788580

2002	0.36
------	------

Year	Quarter	Sales revenue
2002	Q1	\$3326172
2002	Q2	\$2640651
2002	Q3	\$2879303
2002	Q4	\$4186120

Example: Calculating a percentage using the Sum function

You can gain more control over the context in which a percentage is calculated by using the Sum function. If you divide one figure in a set of figures by the total of those figures, you get its percentage of the total; for example, the formula

`[Sales Revenue]/Sum([Sales Revenue])`

gives the sales revenue as a percentage of the total revenue.

In the following table the Percentage of Total column has the formula

`Sales revenue]/(Sum([Sales revenue] In Report))`

and the Percentage of Year column has the formula

`Sales revenue]/(Sum([Sales revenue] In Section))`

These formulas take advantage of the extended syntax keywords [Report](#) and [Section](#) to instruct the Sum function to calculate the overall total revenue and yearly revenue respectively.

2001

Year	Quarter	Sales revenue	Percentage of Total	Percentage of Year
2001	Q1	\$2660700	0.07	0.33
2001	Q2	\$2279003	0.06	0.28
2001	Q3	\$1367841	0.04	0.17
2001	Q4	\$1788580	0.05	0.22

Example: Highlighting values using the If function

The If function receives three inputs: a condition that returns true or false, a value to output if the condition is true and a value to output if the condition is false. For example the formula

```
If([Sales Revenue]>2000000;"High Revenue";"Low Revenue")
```

returns “High Revenue” if the value of [Sales Revenue] is greater than 2000000, “Low Revenue” otherwise. The condition [Sales Revenue]>2000000 is true in the first case, false in the second.

Year	Quarter	Sales revenue	Revenue Description
2001	Q1	\$2,660,700	High Revenue
	Q2	\$2,279,003	High Revenue
	Q3	\$1,367,841	Low Revenue
	Q4	\$1,788,580	Low Revenue
2001			

What if you want to output three descriptions, “High revenue” (for revenues over 2000000), “Medium revenue” (for revenues between 1500000 and 2000000) and “Low revenue” (for revenues below 1500000)? In this case you *nest* If functions. Nesting means placing one If function inside another. The formula is as follows:

```
If ([Sales revenue] > 2000000;"High Revenue"; If ([Sales revenue] >= 1500000;"Medium Revenue";"Low Revenue"))
```

The outer If function outputs “High Revenue” if the revenue is greater than 2000000. If it is not, the inner If function then determines whether the revenue is greater than or equal to 1500000 (in which case it outputs “Medium Revenue”) or less than 1500000 (in which case it outputs “Low Revenue”). The result is as follows:

Year	Quarter	Sales revenue	Revenue Description
2001	Q1	\$2,660,700	High Revenue
	Q2	\$2,279,003	High Revenue
	Q3	\$1,367,841	Low Revenue
	Q4	\$1,788,580	Medium Revenue
2001			

Functions available in Web Intelligence

For a full list of the functions, operators and keywords available in Web Intelligence and additional information on defining the calculation context of functions and formulas, see the **Modifying Reports > Adding Formulas and Variables > Functions** topic in the online help.

For information on **OpenDocument**, a special function that allows you to link to other Web Intelligence documents, see “[Linking documents with OpenDocument](#)” on page 235.

Linking documents with OpenDocument

Overview

OpenDocument is a function that enables you to open another document from within a Web Intelligence document using a URL. You can use OpenDocument to create a hyperlink in one document that opens another document containing related information. Both documents must be stored in the corporate repository and accessible through InfoView.

How OpenDocument works

You place the OpenDocument function in a report cell in the form:

```
= "<OpenDocument function>"
```

For example:

```
= "http://<webserver>/businessobjects/enterprise115/desktoplaunch/opendoc/openDocument.jsp?sType=wid"
```

Example: Link a report, showing sales revenue results for US states to a document showing store information for the state you choose

In this example a Web Intelligence report displays sales revenue per US state for each quarter. A particularly high result interests you. You would like to find out more information about the retail outlets in a specific state, to understand more about their operating conditions, and find out the name of the store managers you could contact across that state.

You click on the hyperlink on the cell that displays "New York." A document opens that contains detailed information about the stores in New York.

Using prompts to filter results in the opened document

You can define the hyperlink to pass parameters that enter one or more values as the response to prompts on the target document. This enables you to dynamically filter the document you open by the specific values you want to analyze.

In the example given above, the target document has a prompt on the [State] object and the OpenDocument hyperlink in the parent document requests Web Intelligence to use the value that is clicked as the value for the prompt. So, when you click the hyperlink on "New York", you see only those values for New York in the target document that opens.

You can specify a value in the hyperlink that is different from the value displayed in the hyperlink. For example, you can create the hyperlink in the cell that displays the sales

revenue values and specify that the target report is filtered by whichever state is displayed on the same table row as the clicked hyperlink.

You can filter the target document by as many prompts as you like. For example, the same hyperlink can also filter the target document by whichever state, product line, and quarter is displayed on the same table row.

You can also filter the target document by multiple values, even though the document contains only a single prompt. For example, a target document with a single prompt on a dimension that represents data for **[Flight Number]** can be filtered by values for other objects in the query definition that are logically related, such as **[Arrival Time]** and **[Departure Time]**. Information on the syntax for single-value and multi-value prompts is provided on ["Using prompts to filter results in the opened document"](#) on page 235.

Supported document types

You can use OpenDocument to create cross-system links to and from the following document types:

- .wid: Web Intelligence version 6.x documents
- .rpt: Crystal reports
- .car: OLAP Intelligence reports

OpenDocument syntax

The general syntax of OpenDocument is

```
http://<webserver>/businessobjects/enterprise115/<platformSpecific>?<parameter_list>
```

There are two implementations of OpenDocument. The form of the <platformSpecific> portion depends on your implementation:

- For Java implementations, use `desktoplaunch/opendoc/openDocument.jsp` in place of <platformSpecific>, for example:

```
http://<webserver>/businessobjects/enterprise115/desktoplaunch/opendoc/openDocument.jsp?sType=w  
id
```
- For .NET implementations, use `InfoView/scripts/opendocument.aspx` in place of <platformSpecific>, for example:

```
http://<webserver>/businessobjects/enterprise115/InfoView/scripts/opendocument.aspx?sType=wid
```

OpenDocument parameters

OpenDocument parameters can appear in any order and must be separated by an ampersand (&). For example, `sType=wid&sDocName=Sales2003`. Do not place spaces around the ampersand.

The parameters are listed in the following tables.

sPath	The name of the Crystal folder and subfolder containing the target document.	Yes if sDocName is specified and is not unique.	Crystal folder and/or subfolder: [folder], [subfolder]

Example: Example of sPath

`http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sPath=Sales+Reports,Sub+Folder.`

Note: To ensure correct URL encoding, the spaces in this parameter and several following parameters are replaced with +. You can ensure correct URL encoding of parameter values with the WebIntelligence URLEncode() function. For more information on URL encoding parameter values, see ["URL encoding"](#) on page 244.

sType	The type of target document or report.	Yes.	.wid .rpt .car

Example: Example of sType

`http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sType=wid`

sDocName	The document name.	One of sDocName or iDocID is mandatory.	The document name.

Example: Example of sDocName

`http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sPath=Sales+Reports&sDocName=Sales+in+2005`

Note: Do not specify both the sDocID and sDocName parameters in the same parameter list. Specify one or the other.

iDocID	The document identifier.	One of sDocName or iDocID is mandatory.	The document identifier.

Example: Example of sDocID

<http://<webservice>/businessobjects/enterprise115/<platformSpecific>?sType=wid&iDocID=2010>

Note: To obtain the document ID, navigate to the document in InfoView, hover your mouse over the document name hyperlink, and look for the ID number in the browser's status bar. You can also obtain the document ID from the Central Management Console.

Note: Do not specify both the sDocID and sDocName parameters in the same parameter list. Specify one or the other.

sIDType	The Crystal object type.	Yes if the target is a Crystal report or OLAP Intelligence report (sType=rpt or car) . Otherwise, use sPath and sDocName).	<ul style="list-style-type: none">• CUID• GUID• RUID• ParentID• InfoObjectID (default)

Example: Example of sIDType

<http://<webservice>/businessobjects/enterprise115/<platformSpecific>?iDocID=AWimiw9StnhGm993evk.Amc&sIDType=CUID>

sReportName	The report to open if the target document is multi-report.	No. (First report is the default value.)	Report name for Web Intelligence documents, sub-report for Crystal Reports, pages for OLAP Intelligence reports.

Example: Example of sReportName

<http://<webservice>/businessobjects/enterprise115/<platformSpecific>?sType=wid&sDocName=Sales+in+2003&sReportName=First+Report+Tab>

sOutputFormat	Format in which the target document is opened.	No. (Default is HTML .)	<ul style="list-style-type: none"> • H (HTML) • P (PDF) • E (Excel) • W (Word) <hr/> <p>Note: W is supported by Crystal Reports only.</p> <hr/>

Example: Example of sOutputFormat

<http://<webservice>/businessobjects/enterprise115/<platformSpecific>?sPath=Sales+Reports&sDocName=Sales+in+2003&sOutputFormat=E>

sReportPart	The part of the report to open.	No.	The name of the report part.

Example: Example of sReportPart

`http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sPath=Sales+Reports&sDocName=Sales+in+2003&sReportPart=Part1`

sPartContext	The data context of the report part (Crystal Reports only).	Yes if a value is specified for sReportPart.	The data context of the report part.

Example: Example of sPartContext

`http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sPath=Sales+Reports&sDocName=Sales+in+2005&sReportPart=Part1&sPartContext=0-4-0`

sInstance	The instance of the target report to open.	No.	<ul style="list-style-type: none">• User (Link to latest instance owned by current user)• Last (Link to latest instance for report)• Param (Link to latest instance of report with matching parameter values)

Example: Example of instance

```
http://<webserver>/businessobjects/enterprise115/<platformSpecific>?  
sPath=Sales+Reports&sDocName=Sales+in+2003&sReportPart=Part1&sInstan  
ce=User
```

sReportMode	For Crystal targets only, indicates whether the link should open the full target report or just the report part specified in sReportPart.	No. (Default is Full.)	<ul style="list-style-type: none">• Full• Part

Example: Example of sReportMode

```
http://<webserver>/businessobjects/enterprise115/<platformSpecific>?  
sPath=Sales+Reports&sDocName=Sales+in+2003&sReportPart=Part1&sReport  
Mode=Part
```

sRefresh	Indicates whether a refresh should be forced when the target document or report is opened.	No.	<ul style="list-style-type: none">• Y (forces the document refresh)• N (note that the refresh on open feature overrides this value)

Example: Example of sRefresh

```
http://<webserver>/businessobjects/enterprise115/<platformSpecific>?  
sType=wid&sDocName=SalesReport&iDocID=2010&sRefresh=Y
```

sWindow	Indicates whether the target report will open in the current browser window or a new window.	No	<ul style="list-style-type: none"> • Same (current window) • New (new window)

Example: Example of sWindow

`http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sType=wid&sDocName=SalesReport&iDocID=2010&sWindow=New`

IsS[NAME]	Specifies a single value for a prompt. [NAME] is the prompt text.	No.	A single prompt value.

Example: Example of IsS[NAME]

`http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sType=wid&sDocName=SalesReport&iDocID=2010&lsSSelect+a+City=Paris`

IsM[NAME]	Specifies multiple values for a prompt. [NAME] is the prompt text.	No.	Multiple prompt values, separated by a comma. If the target is a Crystal report, each value must be enclosed in square brackets. If the target is a OLAP Intelligence report, use the MDX WITH clause.

Example: Example of lsM[NAME]

http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sType=rpt&sDocName=SalesReport&lsMSelect+Cities=[Paris],[London]

lsR[NAME]	<p>Specifies a range of values for a prompt. [NAME] is the prompt text.</p> <hr/> <p>Note: Not supported by OLAP Intelligence.</p>	No.	<p>A range of values separated by a double period (.). If the target is a Crystal report, the range must be enclosed in square brackets and/or parentheses (use a square bracket next to a value to include it in the range, and parentheses to exclude it). If the target is a OLAP Intelligence report, use the MDX WITH clause.</p>

Example: Example of lsR[NAME]

http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sType=rpt&sDocName=SalesReport&lsRTime+Period:=[2000..2004)

lsU	<p>URL to which the user is redirected.</p> <hr/> <p>Note: Not supported by OLAP Intelligence.</p>	No.	A URL.

Example: Example of IsU

```
http://<webserver>/businessobjects/enterprise115/<platformSpecific>?  
sType=wid&sDocName=SalesReport&iDocID=2010&IsU=http://www.site.com
```

IsC	Specifies a universe context (BusinessObjects and Web Intelligence documents only).	No.	Universe context.

Example: Example of IsC

```
http://<webserver>/businessobjects/enterprise115/<platformSpecific>?  
sType=wid&sDocName=SalesReport&iDocID=2010&IsC=Sales
```

NAII	Forces the display of the prompt selection page. Note: Not supported by OLAP Intelligence.	No.	<ul style="list-style-type: none">• Y (all prompts whose values are passed with IsS, IsM or IsR are pre-selected).• N (displays only the prompts whose values passed with IsS, IsM or IsR)

Example: Example of NAII

```
http://<webserver>/businessobjects/enterprise115/<platformSpecific>?  
sType=wid&sDocName=SalesReport&iDocID=2010&NAII=Y
```

Further information on syntax and parameters

URL encoding

Parameters cannot contain spaces or other special characters that require URL encoding. Use the WebIntelligence URLEncode() function to ensure correct URL encoding.

Example: Encoding the sDocName parameter

To pass the string “World Sales Report” in the sDocName parameter, use sDocName=URLEncode(“World Sales Report”). This ensures that the string is passed URL-encoded as “World+Sales+Report”

The examples given earlier in this section do not specify the URLEncode() function explicitly. They give URL parameter values in URL-encoded form.

Trailing spaces

Trim trailing spaces at the end of parameter values and prompt names. Do not replace them with a plus sign (+). The viewer may not know whether to interpret the plus sign (+) as part of the prompt name or as a space. For example, if the prompt name displays:

Select a City: _

(where _ represents a space), enter the following text in the link:

lsSSelect+a+City:=Paris

where the spaces within the prompt name are replaced with the plus sign, and the trailing space is trimmed off.

Note: You can use the WebIntelligence RightTrim() function to trim trailing spaces.

Case sensitivity

All the OpenDocument parameters are case sensitive.

Length limit

The encoded URL cannot exceed 2083 total characters.

Prompts for OLAP Intelligence report targets

If the target document is an OLAP Intelligence report (.car) you can use the lsS and lsM parameters to specify prompts.

Using the lsS parameter with OLAP Intelligence

The parameters are passed in as a URL-encoded string using the unique name of the parameter set up in the OLAP Intelligence report.

Example: Opening a report to a specific page

If 23CAA3C1-8DBB-4CF3-BA%2CB8%2CD7%2CF0%2C68%2CEF%2C9C%2C6F is the URL-encoded unique name for the page parameter in the OLAP Intelligence report, you use the following URL to open the OLAP Intelligence report to page 2:

```
http://<webserver>/businessobjects/enterprise115/<platformSpecific>?sType=car&sIDType=InfoObject&iDocID=440&lsS23CAA3C1-8DBB-4CF3-BA%2CB8%2CD7%2CF0%2C68%2CEF%2C9C%2C6F=2
```

Example: Opening a cube parameter

If 8401682C-9B1D-4850-8B%2C5E%2CD9%2C1F%2C20%2CF8%2C1%2C62 is the URL-encoded unique name for the cube parameter opening the warehouse cube in the catalogue FoodMart 2000 on MSAS, you would use the following URL to open this cube parameter:

```
http://<webservice>/businessobjects/enterprise115/<platformSpecific>?sType=car&sIDType=InfoObject&lsS8401682C-9B1D-4850-8B%2C5E%2CD9%2C1F%2C20%2CF8%2C1%2C62=CATALOG%3DFoodMart%202000,CUBE%3Dwarehouse&iDocID=616
```

Using the lsM parameter with OLAP Intelligence

lsM parameters are also passed in as a URL-encoded string using the unique name of the parameter set up in the OLAP Intelligence report.

The following is an example of using lsM:

```
http://<webservice>/businessobjects/enterprise115/<platformSpecific>?sType=car&sIDType=InfoObject&lsMADC216EA-D9A5-42B5-AE%2C21%2C84%2CA9%2CF9%2C6E%2C31%2C7=[%5BCustomers%5D.%5BCountry%5D.%26%5BMexico%5D],[%5BCustomers%5D.%5BCountry%5D.%26%5BCanada%5D]&iDocID=544
```

This is a memberset parameter opening up a report with Customers > Country > Mexico and Customers > Country > Canada in the view.

Sub-reports

You cannot pass parameter values to a sub-report of a target Crystal report.

Printing, Saving, and Deleting documents

Overview

You can easily print out Web Intelligence reports, to share information on paper. When you print reports, Web Intelligence renders the layout and data of the original reports into Portable Document Format (PDF) for optimum print quality.

You can save Web Intelligence documents exclusively for your personal reference or share your documents with other users. You save Web Intelligence documents to InfoView. You can also save Web Intelligence documents as Microsoft Excel spreadsheets and Adobe Acrobat PDF files. The layout and formatting in the original Web Intelligence document is closely retained in the new file format.

This chapter tells you how to:

- print out the reports in Web Intelligence documents
- save Web Intelligence documents to InfoView
- save Web Intelligence documents as Excel, PDF, or CSV files
- delete Web Intelligence documents from InfoView

Printing reports in Web Intelligence documents

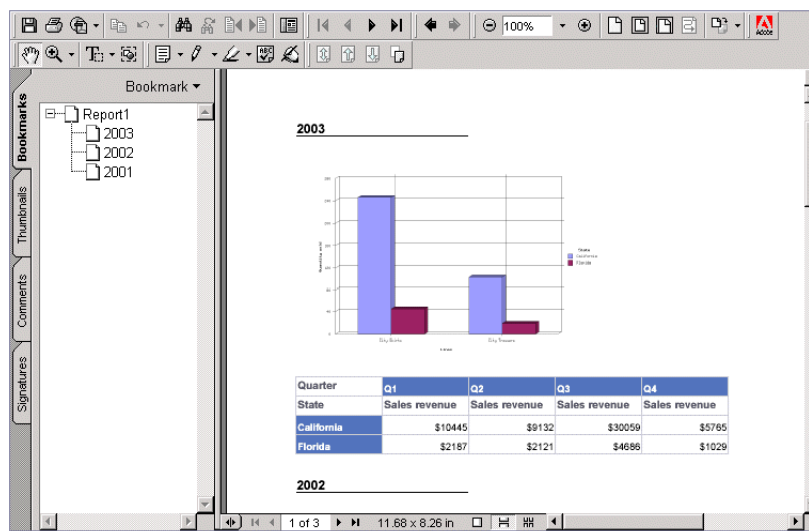
When you print documents, Web Intelligence renders the reports in Portable Document Format (PDF) before you print. This means that the page layout is optimized for printing to paper.

Note: To print documents, you need to have Adobe Acrobat Reader installed on your computer. You can download Acrobat Reader free at www.adobe.com

To print reports

1. With the document open, click the arrow next to the **View** button on the main toolbar above the report.
2. Click **PDF Mode**.

Adobe Acrobat reader launches and the reports appear in PDF format.



3. Print the document by using the Acrobat Reader **Print** command.

Saving Web Intelligence documents to InfoView

You save documents to InfoView. Depending on whether you want exclusive access to documents or whether you want to share documents with other users, you can save documents to personal or public folders.

Note: Before you can save a document, you need to run the query at least once. To do this, click **Run Query** or **Refresh**. The results are displayed on the reports.

To save a new Web Intelligence document in InfoView

1. With the document open, click **Save** on the main toolbar above the displayed reports. The InfoView **Save Document** page opens.
2. In the **Title** box, type the title of the document.
3. In the **Description** box, type a meaningful description of the document (optional).
4. In the **Keywords** box, type keywords that you or other users can use to search for the document in the future (optional).
5. To save the document to a different location than the one displayed in the **Location** box, browse to the folder where you want to save the document, and click **OK**.
6. Select the document category in the **Categories** box.
7. Select **Refresh on open** to refresh the document each time it is opened.
8. Select **Permanent Regional Formatting** to preserve the document regional formatting with the document.
9. Click **OK**.

The document is saved in InfoView.

Saving documents as Excel, PDF, or CSV files

You can save Web Intelligence documents in the following file formats:

- Microsoft Excel spreadsheets
- Adobe Acrobat PDF files
- Comma Separated Values (CSV) files

Saving Web Intelligence documents as Excel Spreadsheets

Creating a copy of your documents as a Microsoft Excel file is especially useful if you want to combine the information in your Web Intelligence document with other data in an Excel spreadsheet.

Unlike Web Intelligence documents, the Excel files are not connected to the database. This means you cannot refresh the data in the Excel file. To display up-to-date data in Excel format, refresh the Web Intelligence document and then save it as a new Excel file.

Note: When you name reports in a document that you want to save as an Excel spreadsheet, the names of reports must not include more than 31 characters or include spaces or the following special characters: * : \ / []

Note: Dates prior to 1900 do not display correctly in Excel.

To save a Web Intelligence document as an Excel spreadsheet

1. With the document open, click **Document**, on the toolbar above the displayed report.
2. Select **Save to my computer as>Excel**.
The **File Download** dialog box appears.
3. Type a file name or accept the default name displayed.
4. Select **Save this file to disk**, and then click **OK**.
5. Select a file location on your computer, then click **Save**.

Web Intelligence saves a copy of your document in Microsoft Excel format to the location you specified on your computer. Each report within the Web Intelligence document converts to a separate Excel worksheet within the Excel file.

NOTE: Some Web Intelligence chart formats do not exist in Excel. These charts are automatically converted to the closest corresponding chart format available in Excel.

To share Excel files with other users, you can save them to InfoView. For more information, see *the BusinessObjects Enterprise InfoView User's Guide*.

Generating Web Intelligence documents to PDF

Creating a copy of your documents as a PDF file is especially useful if you want to provide other users with the document information in a printable format. The page layout and formatting of the Web Intelligence document is retained in the PDF file.

To save a Web Intelligence document as a PDF file

1. With the document open, click **Document**, on the toolbar above the displayed reports.
2. Select **Save to my computer as>PDF**.
The **File Download** dialog box appears.
3. Type a file name or accept the default name displayed.
4. Select **Save this file to disk**, and then click **OK**.
5. Select a file location on your computer, then click **Save**.

Web Intelligence saves a copy of your document in Adobe Acrobat PDF format to the location you specified on your computer.

To share Excel files with other users, you can save them to InfoView. For more information, see *the BusinessObjects Enterprise InfoView User's Guide*.

Generating Web Intelligence documents as CSV files

Creating a copy of your documents as a CSV file is useful if you want to export the data in a Web Intelligence document to a database tool or application.

To save a Web Intelligence document as a CSV file

1. With the document open, click **Document**, on the toolbar above the displayed reports.
2. Select **Save to my computer as>CSV**.
The **File Download** dialog box appears.
3. Select **Save this file to disk**, and then click **OK**.
4. Type a file name or accept the default name displayed.
5. Select a file location on your computer, then click **Save**.

Web Intelligence saves a copy of your document in CSV format to the location you specified on your computer.

Deleting Web Intelligence documents

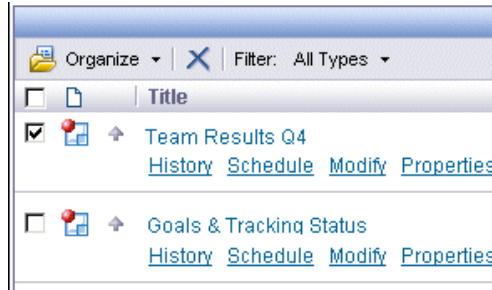
You can delete the Web Intelligence documents you save to InfoView.

Note: You can only delete documents from InfoView if you have the appropriate security profile.

To delete your Web Intelligence documents from InfoView

1. From the InfoView home page, navigate to the folder that contains the document you want to delete.

The documents are listed.



2. Select the check box next to the name of the document you want to delete.



3. Click **Delete**.

A message prompts you to confirm if you want to delete the selected document.

4. Click **OK**.

The document is deleted from InfoView.

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