ibi™ FOCUS®

In-Document Analytics User Guide

Version 9.3.2 | November 2024

Contents

In-Document Analytics

Provides an overview of In-Document Analytics and describes the product requirements.

This topic provides an overview of In-Document Analytics and describes the product requirements. In-Document Analytics has also been known as Active Technologies.

This topic also describes the features of an In-Document Analytics report, which is a report that is enabled to use the full capabilities of In-Document Analytics. An In-Document Analytics report is also called an active report.

In-Document Analytics Report Overview

An In-Document Analytics report is a report that is designed for offline analysis. When using an in-document Analytics report, you can:

- Interact with the data, using analysis options similar to those found in an Excel workbook, without any connection to a server. Analysis options include filtering, sorting, charting, and much more.

- Work offline without any additional plug-ins or programs. An In-Document Analytics report is a self-contained report, meaning that it contains all the data and JavaScript™ within the HTML output file. Packaging the data and the interactive functions in the HTML file also makes the output highly compressible for e-mail and transparent to security systems.

- Save the report on a local machine with In-Document Analytics report functionality. Since no connection to a server is required to view the data or use the analysis options, you can save and use the report anywhere.

  Performance may vary across browsers due to browser-specific memory limitations. For very large reports, Internet Explorer® may produce an error. For more information, refer to the Microsoft® website.

When working with an in-document Analytics report, you can:

- Filter or highlight data.

- Sort data within any column in ascending or descending order.

- Apply calculations to columns and choose the location at which to display the results.

- Control the display of data by hiding columns, freezing columns, limiting the number of rows per page, and using graphic visualization to compare column values.

- Create a variety of simple or advanced charts (pie, line, bar, or scatter) and Rollup Tables.

- Apply a global filter to multiple reports within the same HTML page.

- Export report data and chart data.

- Restore original report settings.

The following image shows an HTML In-Document Analytics report. The pop-up menu is open for the Quantity column, with the Avg Calculate operator selected.

Interactive Features

The HTML page that you receive contains both the JavaScript and the data for the report so that you can interact with the data in a disconnected mode. Internet Explorer detects the JavaScript and issues a warning. If you look at the Internet Explorer warning, it mentions explicitly the detection of In-Document Analytics content, which is the JavaScript. The same warning appears when pop-ups are blocked in the browser.

Because all post-retrieval processing is performed in the memory of the Web browser, an In-Document Analytics report has a processing limit of approximately 5,000 records or 100 pages of output.

Product Requirements for Using In-Document Analytics

In some cases, additional products are required in order to use In-Document Analytics.

In-Document Analytics for Adobe Flash Player Installation Requirements

The following additional installations are required:

- An In-Document Analytics report for Adobe Flash Player is generated using a Java®-based compiler engine that comes with Adobe Open Source Flex® SDK active included on the WebFOCUSWebFOCUS Reporting Server. JSCOM3 is a listener installed with the WebFOCUS Reporting Server that is used when the server compiles a report for Adobe Flash Player. Ensure that the JSCOM3 service is started on the WebFOCUS Reporting Server and that enough memory for Java is allocated to the JSCOM3 service by setting the Maximum Java Heap Size. The recommended Maximum Java Heap Size is 512 megabytes.

- To run a report created using the In-Document Analytics report for Adobe Flash Player (FLEX) format, Adobe Flash Player 10 or higher is required. If your machine does not detect a Flash Player, you are prompted to download a Flash Player. If an older version of Flash Player exists, you need to upgrade.

- If there is no valid license for In-Document Analytics, the report output displays the text In-Document Analytics Trial Version above the data, and charts display the text in the background of the chart image.

- To use the Chart option in the In-Document Analytics report for Adobe Flash Player output, a valid license for Flex® Builder3   Professional is required. If there is no valid license, the charts will display a Flex Data Visualization Trial watermark across the chart image.

  If Flex Builder 3 Professional is already installed on your machine in the same location as your WebFOCUS Reporting Server, it automatically looks for the license in the license.properties file in the Flex Builder 3 Professional application data folder.

  If you have a valid Flex Builder 3 Professional license but Flex Builder 3 Professional

is not installed on the same machine where the WebFOCUS Reporting Server is installed, you can enter the 24-digit Flex Builder 3 Professional license number in the licenses section of the flex-config.xml file, along with the Flex Builder 3 Professional product name in lowercase, as *flexbuilder3*, found in the \home\etc\flex\frameworks folder. Make sure that the licenses section of the flex-config.xml file is not commented out. Save the flex-config.xml file and run the procedure. The compiled SWF file, which is Adobe Flash Player compatible, no longer displays the trial message across the chart image.

- The following browser setting is required to prevent a script error when opening an In-Document Analytics report for Adobe Flash Player file in Internet Explorer.

    ◦ In Windows Internet Explorer 7, or Internet Explorer 6 in Windows Server 2003 Service Pack 2, click **Internet Options** from the Tools menu.

    ◦ Select the **Advanced** tab.

    ◦ Scroll to the Security section and ensure that **Allow active content to run in files on My Computer** is not selected.

    ◦ Click **OK** to close the Internet Options dialog.

In-Document Analytics for PDF Installation Requirements

Adobe Reader® 9 or higher is required so that the Adobe Flash Player run-time code included in the Adobe client can render the SWF content compatible with Adobe Flash Player.

IBM Java Considerations

An In-Document Analytics report for Adobe Flash Player is generated using a Java-based compiler engine that is included with the Adobe Open Source Flex SDK for the WebFOCUS Reporting Server. There is a known issue with the Adobe Flex compiler not working properly with the IBM® version of Java.

In-Document Analytics for Adobe Flash Player require one of the following when using IBM Java:

- A version of IBM Java 1.5.

- IBM Java 1.6.0 SR4 only.

  IBM Java 1.6.0 SR1 through SR3, and SR8 and higher, throw a Java Exception error.

Also, there is a conflict between the version of Xerces that Flex uses and the one that is included with the IBM JVM. As a work-around, ensure that the JVM loads the version of Xerces supplied with Flex instead of the version supplied with the IBM JVM.

Make sure that the Flex compiler uses the *xercesImpl.jar* file that is provided in the Flex library folder under the *ibi* folder. Add the following syntax to the user ID profile that starts the WebFOCUS Reporting Server:

```
export CLASSPATH=/ibi/srv77/home/etc/flex/lib/xercesImpl.jar:$CLASSPATH
```

You must set this value in the CLASSPATH since the Flex compiler does not read the IBI_ CLASSPATH when it is executed.

Traditional MVS Considerations

z/OS (traditional MVS) users must allocate their temporary HTML data sets so that the data sets have a wider LRECL to use HOLD FORMAT AHTML syntax.

The following allocations are required when generating In-Document AnalyticsReports:

```
ALLOC F(JPG)       DA('hlq.F.HOME.BIN') SHR REUSE
ALLOC F(JS)        DA('hlq.F.HOME.ETC') SHR REUSE
ALLOC F(EDAHETC)   DA('hlq.F.HOME.ETC') SHR REUSE
ALLOC F(EDAHBIN)   DA('hlq.F.HOME.BIN') SHR REUSE
```

where:

hlq

  Is the high-level qualifier for your FOCUS production data sets.

Language Requirements

On some UNIX® systems, such as Linux and Oracle® Solaris, the system locale may be set by default to a UTF-8 encoding value, such as en_US.UTF-8.

Unless you are running the WebFOCUS Reporting Server in Unicode, this setting causes JSCOM to run in UTF-8 mode and corrupts the buffer.

On these systems, you can check the language that is set by typing:

```
locale
```

Make sure that the setting reflects the language that you are planning to use on the WebFOCUS Reporting Server. For example, if the WebFOCUS Reporting Server is set to 437 English only, make sure that the server is started with the correct English system locale.

You can add the LANG setting to the edastart shell script, or you can add it to the profile of the user ID that starts the server. For example, add the following to set the language to English on Linux:

```
export LANG=en_US.iso88591
```

On Oracle Solaris, you need to set LC_ALL, in addition to LANG. For more information, contact your UNIX administrator.

If the data in the In-Document Analytics report contains National Language Support (NLS) characters, you must configure the server for NLS in order to display the correct characters. For more information, see the *WebFOCUS Server Administration for UNIX, Windows, OpenVMS, IBM i, and z/OS* manual.

The web server must support NLS file names if you are using NLS characters in an swf file name. For example, Tomcat standalone does not support the use of NLS file names.

Creating In-Document Analytics Components With FOCUS Syntax

Describes how to create and use In-Document Analytics reports and In-Document Analytics charts with FOCUS syntax.

This topic describes how to create and use In-Document Analytics reports and In-Document Analytics charts with FOCUS syntax.

The reports described in this topic are enabled to use the full capabilities of In-Document Analytics. They are called In-Document Analytics reports or active reports.

Creating an In-Document Analytics Report

An In-Document Analytics report provides customizable options for creating an HTML-formatted report that enables users to experience features similar to those found in Excel workbooks. An In-Document Analytics report is designed for distribution to users to perform offline analysis and interactive functions without any connection to a server. All of the data and JavaScript code are stored within the HTML file, which also makes the output highly compressible for e-mail and transparent to security systems.

Specific FOCUS StyleSheet commands enable developers to set the initial state of the report and control the options available to users. When you develop In-Document Analytics reports, the options that you can control include:

- Applying calculations to columns and choosing the location to display results.
- Controlling the display of data by hiding or freezing columns.
- Limiting the number of rows displayed per page.
- Adding a graphic visualization column to compare column values.
- Customizing the colors for most of the report components.

Create an In-Document Analytics Report

To create an HTML in-document Analytics report, use

```
ON TABLE {HOLD|SAVE} FORMAT AHTML
```

where:

HOLD

Saves the report output to a temporary file for later use.

SAVE

Saves the report output to a file for later use.

AHTML

Creates an HTML version of the report.

Creating an In-Document Analytics Report

The following code generates an HTML In-Document Analytics report.

All customized (non-default) values and corresponding keywords, used to specifically format an HTML In-Document Analytics report, are shown in bold.

```
TABLE FILE CENTURYSALES
SUM
     ORDERNUMBER
     ORDERDATE
     QUANTITY
     LINEPRICE
     BY PLANTCODE AS 'Plant'
ON TABLE SET PAGE-NUM OFF
ON TABLE SET BYDISPLAY ON
ON TABLE NOTOTAL
ON TABLE HOLD FORMAT AHTML
ON TABLE SET STYLE *
     UNITS=IN,
     SQUEEZE=ON,
     ORIENTATION=PORTRAIT, $
```

```
TYPE=REPORT,
     GRAPHCOLOR='GREEN',
     GRAPHCOLORNEG='RED', $
```

```
TYPE=REPORT,
     FONT='ARIAL',
     SIZE=9,
     COLOR='BLACK',
     BACKCOLOR='NONE',
     STYLE=NORMAL,
     FREEZE-WIDTH=AUTO,
     LINES-PER-PAGE=30,
     CALC-LOCATION=BOTTOM,$
```

```
TYPE=TITLE, STYLE=BOLD, $
TYPE=REPORT,
     OBJECT=MENU,
     COLOR=RGB(0 51 102),
     HOVER-COLOR='WHITE',
     BACKCOLOR=RGB(51 204 204),
     HOVER-BACKCOLOR='PURPLE',
     BORDER-COLOR='FUCHSIA', $
```

```
TYPE=REPORT,
     OBJECT=STATUS-AREA,
     COLOR=RGB(153 51 0),
     BACKCOLOR='AQUA', $
```

```
TYPE=REPORT,
     OBJECT=CURRENT-ROW,
     HOVER-BACKCOLOR=RGB(255 255 153),
     BACKCOLOR=RGB(255 153 0), $
```

```
TYPE=REPORT,
     OBJECT=CALC-AREA,
     COLOR=RGB(153 51 0),
     BACKCOLOR=RGB(255 204 153), $
```

```
TYPE=REPORT, COLUMN=N2, CALCULATION=CNT, $
TYPE=REPORT, COLUMN=N4, CALCULATION=SUM, $
```

```
ENDSTYLE
END
```

The output is:

Starting at the top of the report, notice the customized background colors, the record status and page navigation bar, the first data row (which is selected), the fourth data row (which is hovered), and the calculation row at the bottom.

Controlling Formatting Options for In-Document Analytics Reports

Some of the formatting options can only be controlled or implemented from the user menus in the output of an In-Document Analytics report. For more information about these options, see Creating an In-Document Analytics Report.

You can set the initial state of an In-Document Analytics report by customizing many report options with FOCUS StyleSheet syntax. You can enable or disable some options prior to distribution to users. The following syntax sections describe the options that you can control.

Control the Report View Options

To control the report view options, which determine whether a tabular or expandable report is created, use

```
ON TABLE SET EXPANDABLE={ON|OFF}
```

where:

ON

Creates an expandable report.

OFF

Creates a tabular report. OFF is the default value.

The pagination and freeze options are not available with the expandable report view option.

> ✓ **Tip:** When you use In-Document Analytics reports, it is recommended that you set the system font display to **normal** to ensure that the menu icons display correctly.

To set the system font display, right-click anywhere on the desktop, select **Properties** from the pop-up menu, select the **Settings** tab in the Display Properties dialog box, click the **Advanced** button, set the Font Size to **Small Fonts**, and click **OK**. These steps are for Windows 2000. They may vary by operating system.

Control the Window Display Option

To control how Windows display in the report output when multiple Windows are open in the Web browser, use

```
TYPE=REPORT, WINDOW-DISPLAY=coldesc, $
```

where:

coldesc

Enables the report to display multiple open Windows as tabs or cascaded Windows in the Web browser. Multiple Windows are created in the browser when viewing data as a chart, a roll-up table, and so on.

Valid values are CASCADE or TAB.

Control the Row Selection Colors

To control the colors of the row being selected or hovered over, use

```
TYPE=REPORT, OBJECT=CURRENT-ROW, HOVER-BACKCOLOR=hovercolor,
BACKCOLOR=selectcolor, $
```

where:

CURRENT-ROW

Specifies the object, which is the current row where the mouse pointer is clicked, or is hovering.

hovercolor

Specifies the background color of the row where the mouse pointer is hovering. The default value is RGB(255 252 204), which is a shade of yellow. Valid values can be either a preset color name in single quotes, for example, 'YELLOW', or the RGB (red green blue) numeric values, for example, RGB(255 255 153).

selectcolor

Specifies the background color of the row selected (click anywhere within a row). The default is RGB(51 255 204), which is a mix of green and blue. Valid values can be either a preset color name in single quotes, for example, 'BLUE', or the RGB (red green blue) numeric values, for example, RGB(153 53 0).

Control User Menu Options

To control the user menu options, which determine the location and color characteristics of the user menu in the report, use the appropriate syntax section that follows.

To control all of the colors of the user menu, use

```
TYPE=REPORT, OBJECT=MENU, COLOR=textcolor,
HOVER-COLOR=hovertextcolor,BACKCOLOR=backcolor,
HOVER-BACKCOLOR=hoverbackcolor,BORDER-COLOR=bordercolor, $
```

where:

MENU

Specifies the object, which is the user menu.

textcolor

Specifies the color of the text (font) in the user menu. BLACK is the default value. Valid values can be either a preset color name in single quotes, for example, 'YELLOW', or the RGB (red green blue) numeric values, for example, RGB(153 153 153).

hovertextcolor

Specifies the color for the hover text in the user menu. BLACK is the default value. Valid values can be either a preset color name in single quotes, for example, 'RED', or the RGB (red green blue) numeric values, for example, RGB(255 255 153).

backcolor

Specifies the color for the background (non-text) areas in the user menu. SILVER is the default value. Valid values can be either a preset color name in single quotes, for example, 'GOLD', or the RGB (red green blue) numeric values, for example, RGB(153 51 0).

hoverbackcolor

Specifies the color for the background area of the user menu where your mouse pointer is hovering. WHITE is the default value. Valid values can be either a preset color name in single quotes, for example, 'ORANGE', or the RGB (red green blue) numeric values, for example, RGB(51 204 204).

You can use this, along with the hover text color, to visually contrast the menu option where the mouse is currently hovering from the rest of the menu.

bordercolor

Specifies the color for the borders of the user menu. WHITE is the default value. Valid values can be either a preset color name in single quotes, for example, 'BLUE', or the RGB (red green blue) numeric values, for example, RGB(255 255 153).

Control the Calculations Options

To control the calculations options, which determine the column and the calculation you want to perform, along with the styling characteristics of the calculation results row, use

the appropriate syntax section that follows.

- To perform column calculations, use

```
TYPE=REPORT, COLUMN=coldesc, CALCULATION=calc, $
```

Where:

coldesc

Specifies the description (column name or identifier) of the column where you want to perform a calculation.

calc

Specifies the calculation to be performed. The default is no calculation.

For columns containing numeric data, select from: SUM, AVE, MIN, MAX, CNT, CNT.DST, PCT.TOT

PCT.TOT values appear in a separate column adjacent to the column for which it is calculated, and styling is inherited from the the visualization column.

For columns containing text (alphanumeric) data, select from: CNT, CNT.DST

- To control the location of the calculation results row, use

```
TYPE=REPORT, CALC-LOCATION={TOP|BOTTOM}, $
```

where:

TOP

Specifies the top row of the report as the location of the calculation results. TOP is the default value.

BOTTOM

Specifies the bottom row of the report as the location of the calculation results.

- To control the colors of the calculation results row, use

```
TYPE=REPORT, OBJECT=CALC-AREA, COLOR=color, BACKCOLOR=backcolor, $
```

where:

CALC-AREA

Specifies the object, which is the calculation results row.

color

Specifies the color for the calculation values in the calculation results row. The default value is BLACK and is inherited from the column title font color. Valid values can be either a preset color name in single quotes, for example, 'RED', or the RGB (red green blue) numeric values, for example, RGB(255 255 153).

backcolor

Specifies the color for the background in the calculation results row. The default value is WHITE and is inherited from the column title background color. Valid values can be either a preset color name in single quotes, for example, 'GOLD', or the RGB (red green blue) numeric values, for example, RGB(153 51 0).

Control the In-Document Analytics Cache Option

Because all post-retrieval processing is performed in the memory of the Web browser, an In-Document Analytics report has a processing limit of approximately 5,000 records or 100 pages of output. The In-Document Analytics cache option enables you to send only the first page of In-Document Analytics report output to the browser and retrieve subsequent pages from a temporary cache on the WebFOCUS Reporting Server. The server also becomes the resource for performing all calculations, sorting, and filtering when active cache is enabled. Since active cache uses on-demand paging functionality, WebFOCUS Viewer is not supported.

To enable the active cache for In-Document Analytics reports, use:

```
ON TABLE SET WEBVIEWER {ON|OFF}
```

```
ON TABLE SET CACHELINES {n|100}
```

where:

ON

Runs the In-Document Analytics report with active cache enabled.

OFF

Will not enable active cache when the In-Document Analytics report is run. OFF is the default value.

***n*|100**

Specifies the number of rows from the cache. The default is 100.

> ✔ **Tip:** It is recommended that you set the number of rows retrieved five times greater than the number of lines retrieved per page (as indicated in SET LINES). The minimum number of rows retrieved is 100. Setting LINES greater than 200 with the AHTML output format produces a report with no output. If editing the SET LINES syntax for a procedure with AHTML, it is recommended that you code SET LINES equal to or less than 200 since the Internet Explorer JavaScript engine is slower than any other browser (such as Firefox, Opera, Chrome , and so on).

Control the Visualization Colors Options

To control the colors of the graphic values used with the visualization option, use

```
TYPE=REPORT, GRAPHCOLOR=positivecolor, GRAPHCOLORNEG=negativecolor, $
```

where:

positivecolor

Specifies the color for the positive values displayed in the optional visualization column. BLACK is the default value. Valid values can be either a preset color name in single quotes, for example, 'BLUE', or the RGB (red green blue) numeric values, for example, RGB(255 255 153).

negativecolor

Specifies the color for the negative values displayed in the optional visualization column. BLACK is the default value. Valid values can be either a preset color name in

single quotes, for example, 'VIOLET', or the RGB (red green blue) numeric values, for example, RGB(153 153 153).

Control the Freeze Column Options

To control the freeze column options, which determine the column (and all columns to the left) that will freeze when scrolling to the right to view other columns in the report output, use

```
TYPE=REPORT, FREEZE-COLUMN=coldesc, $
```

or

```
TYPE=REPORT, FREEZE-WIDTH=AUTO, $
```

where:

coldesc

Specifies the description (column name or identifier) of the column that you want to freeze. You can only specify one freeze column, which must be a BY sort field. The default value is none (no freeze column).

AUTO

Enables the report to freeze at a particular column that will be automatically determined by FOCUS for optimal viewing.

If you can view the entire report output on the screen without scrolling, the freeze will not be applied.

Control Hide Columns Options

To control the hide columns options, which determine the columns that will be hidden from view in the report output, repeat the following for each column you want to hide.

```
TYPE=REPORT, COLUMN=coldesc, HIDE={ON|OFF}, $
```

where:

coldesc

Specifies the description (column name or identifier) of the column that you want to hide. You can hide multiple columns, but you cannot hide all columns (at least one column must always be visible).

ON

Enables the option.

OFF

Disables the option. OFF is the default value.

Display NOPRINT Fields in an In-Document Analytics Report Menu

To display NOPRINT fields in the In-Document Analytics report dropdown menu, use

```
TYPE=REPORT, ALLOW-NOPRINT={ON|OFF}, $
```

where:

ON

Displays all NOPRINT fields in the In-Document Analytics report menu.

OFF

Does not display NOPRINT fields in the In-Document Analytics report menu. OFF is the default value.

> **Note:** This setting does not affect fields hidden using HIDE=ON syntax. In order to simply hide the field, but make it available for later use in an In-Document Analytics report dropdown menu, use HIDE=ON syntax instead.

Show or Hide In-Document Analytics Report Menu Options

To control In-Document Analytics report menu options available to the users, use

```
TYPE=REPORT, ALLOW-feature={ON|OFF}, $
```

where:

feature

    Specifies the feature. Select from:

    PAGINATION to enable the use of show records options.

    FILTER to enable the use of filtering or highlighting options.

    FREEZE to enable the use of freeze column options.

    CALC to enable the use of calculation options.

    HIDE to enable the use of hide columns options.

    CHART to enable the use of chart creating options.

    EXPORT to enable the use of exporting options.

    VISUALIZE to enable the use of graphical visualization options.

    SORT to enable the use of sorting options.

    ROLLUP to enable the use of roll-up table options.

    PIVOT to enable the use of pivot table options.

    COMMENTS to enable the use of comment options.

    WINDOW to enable the use of window type options.

    RESTORE to enable the use of restore options.

    SENDEMAIL to enable the use of send as e-mail options.

    SAVECHANGE to enable the use of save changes options.

    PRINT to enable the use of print options.

TOOLS to enable the use Chart/Rollup Tool, Pivot Tool, and Grid Tool options.

ON

Enables the option. ON is the default value for all user-controlled options.

OFF

Disables the option.

Controlling the Pagination Options

For In-Document Analytics reports, you can:

- Determine the number of rows displayed per page and the styling characteristics of the record status and page navigation bar. For details, see Creating an In-Document Analytics Report.

- Customize the pagination bar to display the range of records that appear on the current page of the report, instead of displaying the default filtered number of records and total number of records. For example, the pagination bar on the first page of an In-Document Analytics report might display the following sample values:

```
1–25 records, Page 1 of 4
```

  You can display the range of records that appear on a page by creating a JavaScript file that overwrites the default display. For details, see Creating an In-Document Analytics Report.

- Suppress the display of the pagination bar. For details, see Creating an In-Document Analytics Report.

Determining the Number of Rows Per Page and Styling Characteristics

This topic describes the syntax for determining the number of rows displayed per page and the styling characteristics of the record status and page navigation bar.

Determine the Number of Rows Per Page and Styling Characteristics

Use the appropriate syntax section that follows.

- To control the number of rows displayed per page in the output, use

```
TYPE=REPORT, LINES-PER-PAGE={n|UNLIMITED},$
```

Where:

n

Specifies the number of rows displayed on each HTML page. The default value is 20 rows when the LINES-PER-PAGE option is used. Otherwise, the server default value is 57 rows.

UNLIMITED

Specifies that you want to show all the results on one HTML page.

- To control the position, justification, and colors of the record status and page navigation bar, use

```
TYPE=REPORT, OBJECT=STATUS-AREA,PAGE-LOCATION={TOP|BOTTOM},JUSTIFY=
{LEFT|CENTER|RIGHT},
COLOR=textcolor, BACKCOLOR=backcolor,$
```

where:

STATUS-AREA

Specifies the object, which is the record status and page navigation bar.

The record status and page navigation bar show row and page information, where your cursor is positioned, relative to the total number of rows and pages in the report (for example, 10 of 100 records (10.00%), Page 1 of 3).

PAGE-LOCATION

Specifies the location of the record status and page navigation bar, which is either at the top of the report above the report header, or at the bottom of the report below the report footer. TOP is the default value.

JUSTIFY

Specifies whether you want the information in the record status and page navigation bar to be centered, left-justified, or right-justified. CENTER is the default value.

textcolor

Specifies the text color for the record status and page navigation bar. BLACK is the default value. Valid values can be either a preset color name in single quotes, for example, 'GREEN', or the RGB (red green blue) numeric values, for example, RGB (153 153 153).

backcolor

Specifies the background color for the record status and page navigation bar. SILVER is the default value. Valid values can be either a preset color name in single quotes, for example, 'WHITE', or the RGB (red green blue) numeric values, for example, RGB(51 153 102).

Displaying the Range of Records on a Page

By default, the strings and parameters used to display the pagination bar are stored in the *IRPSTR* member of the data set allocated to DDNAME JS.

Display the Range of Records on a Page

Procedure

1. Copy member **IRPSTR** from the data set allocated to DDNAME JS to your own data set and concatenate your library in front of the data set delivered with FOCUS in your allocation for DDNAME JS.

2. Open member **IRPSTR** (from your data set) in a text editor and locate the following code:

```
'paglinetext':"<%^%rcs of %trcs records, Page %inds of %pgs%>
<span id='smsg%tn'><\/span>"
```

3. Replace the preceding code with this code:

```
'paglinetext':"<%^%frcs-%lrcs records, Page %inds of %pgs%>
<span id='smsg%tn'><\/span>"
```

4. Save the **IRPSTR** member file and close the text editor.

5. Run an In-Document Analytics report with format AHTML.

   The pagination bar is displayed as follows. By default, 20 records are displayed on each page. As a result, the customized pagination bar displays a range of 1-20 records on the first page.

6. To change the default number of records displayed on each page, use the following StyleSheet declaration:

```
TYPE=REPORT,LINES-PER-PAGE=n,$
```

   where:

   n

      Is the number of lines per page to display.

7. To change the location of, text justification, text color, and background color of the pagination bar, use the following StyleSheet declaration:

```
TYPE=REPORT,OBJECT=STATUS-AREA,
    JUSTIFY=just,
    PAGE-LOCATION=location,
  COLOR=textcolor,
  BACKCOLOR=backcolor,
```

   where:

just

Is the justification for the text in the pagination bar. Valid values are LEFT, CENTER, or RIGHT. CENTER is the default value.

location

Is the location of the pagination bar. Valid values are TOP or BOTTOM. TOP is the default value.

textcolor

Specifies the text color, either a color name enclosed in single quotation marks, or a color code in the form RGB(r,g,b). The default value is BLACK.

backcolor

Specifies the background color, either a color name enclosed in single quotation marks, or a color code in the form RGB(r,g,b). The default value is SILVER.

For example, use the following StyleSheet declaration and run the report:

8. Run the In-Document Analytics reportusing the following StyleSheet declaration.

```
TYPE=REPORT, LINES-PER-PAGE=10,
    OBJECT=STATUS-AREA,
    JUSTIFY=LEFT,
    PAGE-LOCATION=BOTTOM,$
```

The pagination bar now displays 10 records per page, as shown in the following image. Based on the styling characteristics supplied in the request, the pagination bar appears at the bottom of the page, and the text inside the pagination bar is left-justified.

> ✔ **Tip:** You can also specify the number of records to display per page when a report is run. Click **Show Records** from a drop-down menu on the report. In the following image, 5 Records per page is selected.

Suppressing the Display of the Pagination Bar

You can suppress the display of the pagination bar using FOCUS StyleSheet code.

```
ON TABLE SET STYLE *
TYPE=REPORT,
    OBJECT=STATUS-AREA,
    PAGE-LOCATION=OFF,
$
ENDSTYLE
```

Once you suppress the display of the pagination bar, you can no longer navigate to a page after the first page if the number of records in the report exceeds the records (lines) per page that you set.

User-Controlled Options in an In-Document Analytics Report

The following options can be implemented only from the user menus in the output of an In-Document Analytics report. Basic information for each of these options provides a more comprehensive understanding of this type of report.

- Sorting data

  If the ALLOW-SORT option is enabled, you can sort columns in either ascending or descending order. For string data types, the sorting is alphabetical. For date data types, the sorting is chronological. Only single column sorts are supported.

- Adding visualization graphics to an HTML In-Document Analytics report

  If the ALLOW-VISUALIZE option is enabled, you can display visualization graphics in a new column inserted into the report to the right of the selected column. Negative values appear with colored bars that extend to the left of center, and positive values appear with colored bars that extend to the right of center.

- Creating charts in an In-Document Analytics report

  If the ALLOW-CHART option is enabled, you can create charts using roll-up tables. All applied filters are respected, and all calculation methods are available to create aggregation charts. A selected BY sort field and a measure column are required. There is also an option to open charts in separate browser Windows.

- Exporting In-Document Analytics reports

  If the ALLOW-EXPORT option is enabled, you can export all data, or filtered data only.

The export method only exports data, not the JavaScript code, which makes exported reports static without the interactive options available in an In-Document Analytics report. The export formats supported are: Save as HTML (formatting is preserved), XML export to Excel (formatting is not preserved), and Save as CSV (formatting is not preserved).

- Filtering or highlighting data

  If the ALLOW-FILTER option is enabled, you can filter or highlight data. Filtering limits the output to display only data that meets the criteria in the WHERE clause specified with the user menus. Highlighting changes the color of the data in the output based on the criteria in the WHERE clause specified with the user menus.

- Applying global filters to multiple In-Document Analytics reports

  When multiple In-Document Analytics reports are inserted in the same HTML page, you can apply filters on all reports containing a common BY sort field.

Controlling Expiration of an In-Document Analytics Report

The AREXPIRE parameter enables you to set the date when an In-Document Analytics report expires and the report output can no longer be displayed.

The syntax is

```
SET AREXPIRE = {yymmdd|xxxDAYS}
```

where:

yymmdd

Is the expiration date in the format of year, month, and day. For example, if you want the report to expire on January 1, 2009, use 090101.

xxx

Is the number of days from the current date that the report expires. Valid values are 1 to 999.

The command can also be issued from within a request using:

```
ON TABLE SET AREXPIRE {yymmdd|xxxDAYS}
```

Setting a Password for an In-Document Analytics Report

The ARPASSWORD parameter enables you to set a password that is required to view In-Document Analytics report output. Prior to opening the report output, the user is prompted to enter a password to unlock the report.

The syntax is

```
SET ARPASSWORD = password
```

where:

password

 Is any character string up to 32 characters in length.

The command can also be issued from within a request using:

```
ON TABLE SET ARPASSWORD password
```

Usage Notes for FOCUS Commands and Features

The following is a list of commands and features that are not supported for HTML In-Document Analytics reports:

- OVER, including Financial Modeling Language (FML)

- PAGE-BREAK

- RECAP

- SKIP-LINE

- HTMLCSS

- Calling an external Cascading StyleSheet (CSS) file to style reports

- BORDER

Using an In-Document Analytics Report

Describes how to run reports enabled for In-Document Analytics and use their features and functionalities.

This topic describes how to run reports enabled for In-Document Analytics and use their features and functionalities.

A report that is enabled for In-Document Analytics is called an In-Document Analytics report or an active report.

Navigating Between Pages

The following image shows the pagination options in an In-Document Analytics report.

Use any of the following options to navigate between pages in the In-Document Analytics report.

- The pagination options are located on the top of the report by default. To move the location of the pagination options to the bottom of the page, click the pagination icon.

- Navigate between pages by using the scrolling arrows. A single arrow indicates the previous or next page, and the double arrows indicate the first or last page in the report.

- The current page number of the report is underlined. Click the current page number to enter a new page number and press the Enter key.

Filtering and Highlighting Data

You can apply operators to your report data so that you either filter data or highlight data based on criteria you define. You can apply multiple filters to a report and you can apply filters to filtered data. A global filter is a filter that is applied to reports that contain the column you are filtering on.

Operators include:

- **Equals.** Equals a specific value or values. If you select more than one value, OR logic is used to retrieve records.

- **Not equal.** Does not equal a specified value.

- **Greater than OR Greater than or equal to.** Greater than or greater than or equal to a specific value.

- **Less than OR Less than or equal to.** Less than or less than or equal to a specific value.

- **Between.** Between a set of values.

- **Contains OR Contains (match case).** Finds values that include a character string you specify. The string can occur in any position in the value you are testing. You can use this option for case-insensitive (Contains) and case-sensitive strings (Contains (match case)).

- **Omits OR Omits (match case).** Finds values that do not include a character string you specify. You can use this option for case-insensitive (Omits) and case-sensitive strings (Omits (match case)).

Filter or Highlight Data in an In-Document Analytics Report

Procedure

1. Click the arrow in the heading of the column that you want to filter on. Click **Filter** and then the operation.

   The Filters Selection dialog box opens. You can change the operation after you select it.

2. Enter a value or values, depending on the operation you select.

   Values are entered either by typing a value in a text box or selecting a value from a drop-down list.

3. Click **Add Condition** if you want to enter additional filters.

   If you are adding additional filters, you can apply either AND or OR logic. AND logic considers all filters and all data must pass all filters in order to be included in the report output. OR logic considers filters independently and includes data that meets any of the applied filters in the report output.

4. Click **Filter** or **Highlight**.

Result

Once you apply a filter or highlight, and minimize the selection dialog box, the selection dialog box appears as a button (Filter Selection or Highlight Selection) in the bottom of the window. You can click the button to access the dialog box. If you close the dialog box, all filters and highlights clear from the report output.

Remove Filters or Highlighting

In the Filter Selection dialog box, click the X adjacent to the filter or highlight you want to remove. To remove all filters or highlights, click **Clear All**.

Also note that if you close the Filter Selection dialog box, all filters clear from the report output.

Filter Selections Using Multiple Values

When you select a value in the Filter Selection dialog box, a value selection dialog box displays if there are over 20 data values. Additionally, when item(s) are selected in the value selection dialog box, the item is highlighted and checked to indicate the selection.

Selecting multiple values is available for Equals and Not Equal conditions.

Procedure

1. Click the arrow in the heading of the column that you want to filter on. Click **Filter** and then the operation.

   The Filter Selection dialog box opens.

2. Enter a value or values, depending on the operation you select.

   Values are entered either by typing a value in a text box or selecting a value from a drop-down list.

   If there are over 20 data values for the column, a value selection dialog box appears, as shown in the image below.
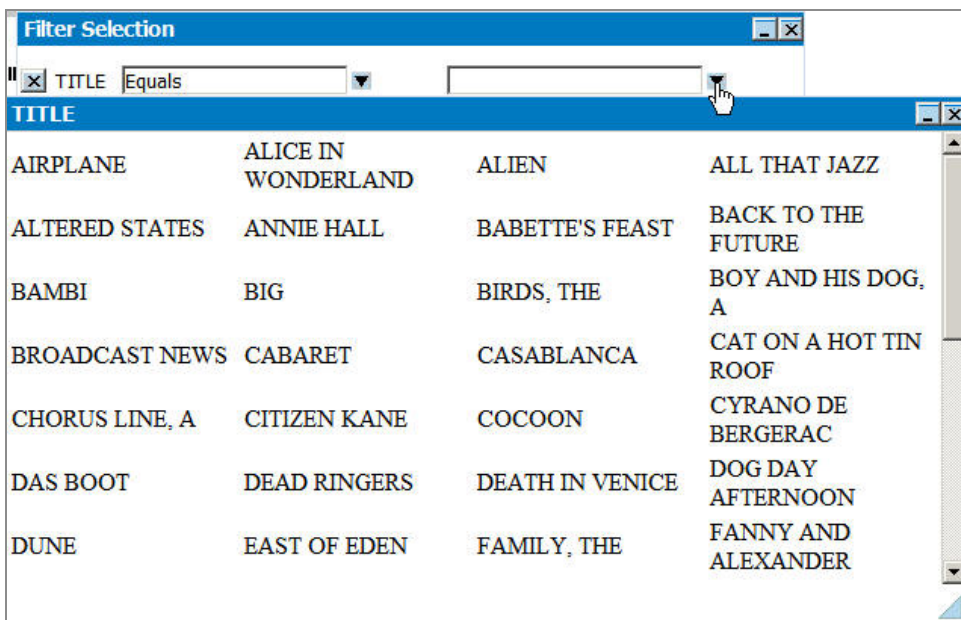
3. Select a value, or values, in the value selection dialog box.

   The item(s) selected are highlighted and checked, as shown in the image below.

While the value selection dialog box appears for both alphanumeric and numeric data, indicated selections only appear for alphanumeric data.

4. Close the value selection dialog box to add your selections to the Filter Selection dialog box.

5. Click **Filter** to apply the filter to the report.

# Usage Notes for Filtering Data

The following apply when filtering data:

- Filtering data in the Scientific Notation format is not supported.

- Applying a filter to an In-Document Analytics report with a calculation applied to a numeric column correctly displays the filtered percentage. The filtered percentage does not appear for non-numeric columns.

- If no records are returned after applying a filter, the Status Bar states Page 1 of 1 and, for example, 0 of 10 records.

Usage Notes for Selecting Values

The following apply when selecting values to be filtered:

- If there are less than 20 unique values in the matching records to be filtered, they will be displayed in a drop-down list, as shown in the following image.

  You may not type input values in the filter field.
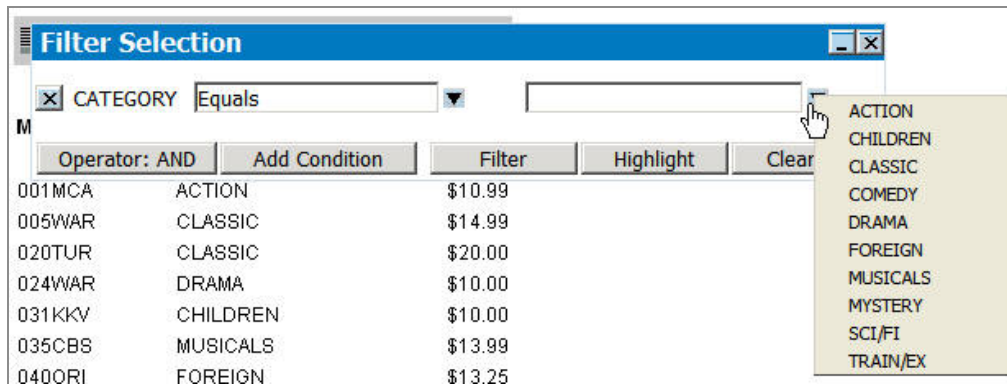
- If there are more than 20 and less than 1,000 unique values, the value selection dialog box appears, as described in Filter Selections Using Multiple Values

  You may not type input values in the filter field.

- If there are more than 1,000 unique values, there is no value selection dialog box or filter value drop-down list. Manually type the input value in the filter value field.
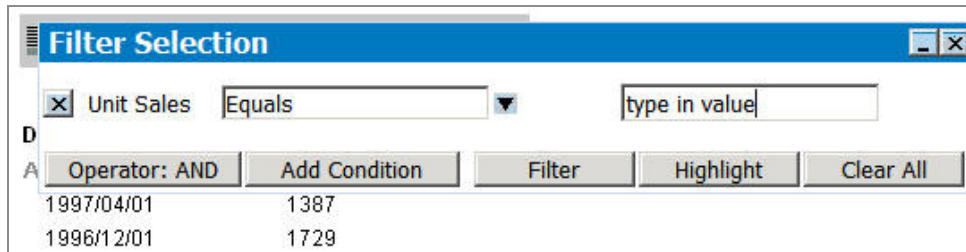
Toggle Calculation Types for Filtered Data

When a filter is applied to a report with calculations, the report refreshes and the calculated column total shows the value for the filtered data. A calculation icon appears on the pagination bar, enabling you to toggle between calculation types for the filtered data.

The calculation icon only appears when a filter is applied to a report with calculations.

Click the calculation icon on the pagination bar to toggle between calculations for the filtered data. Note that the column total value changes accordingly, as shown in the images below.
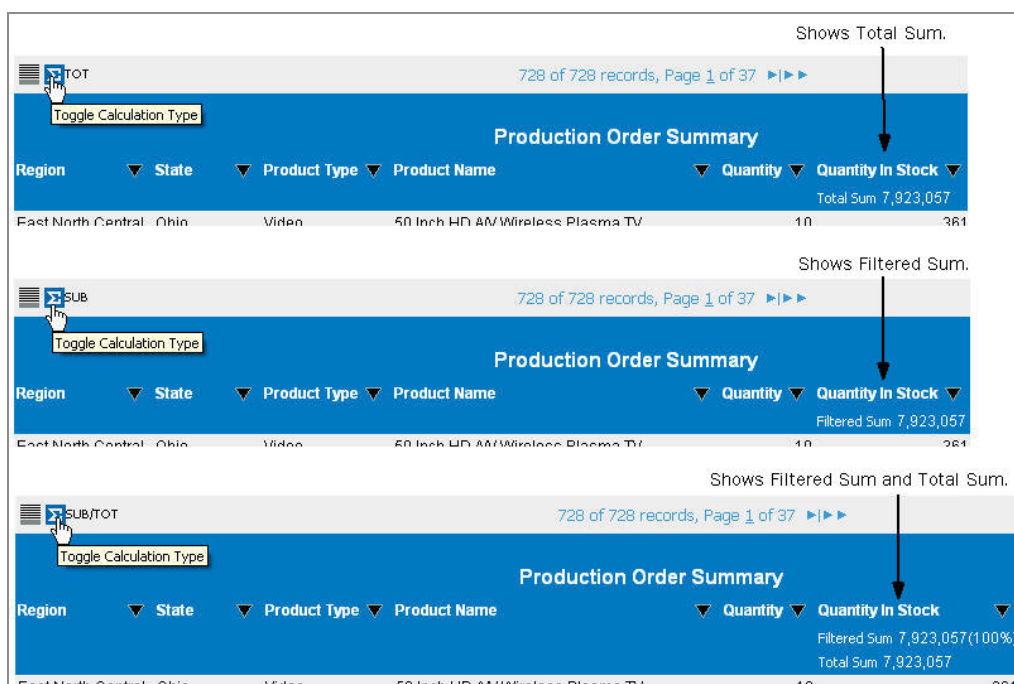
Filtering, Highlighting, and Commenting Individual Rows of Data

In addition to using column controls to filter and highlight your report, you may also filter, highlight, and comment individual rows of data in the In-Document Analytics report output.

When a row is selected, the context menu offers options to add comments, highlight values and rows, and filter cells.

For example, the image below shows the context menu for a row in the In-Document Analytics report output.

Add Comments to a Row in the In-Document Analytics Report Output

You may add multiple comments per row. Comments cannot be edited but they can be deleted.

Procedure

1. Select the row of data that you want to add a comment for, click and select **Comments** from the context menu.

   The Add Comment dialog box appears.
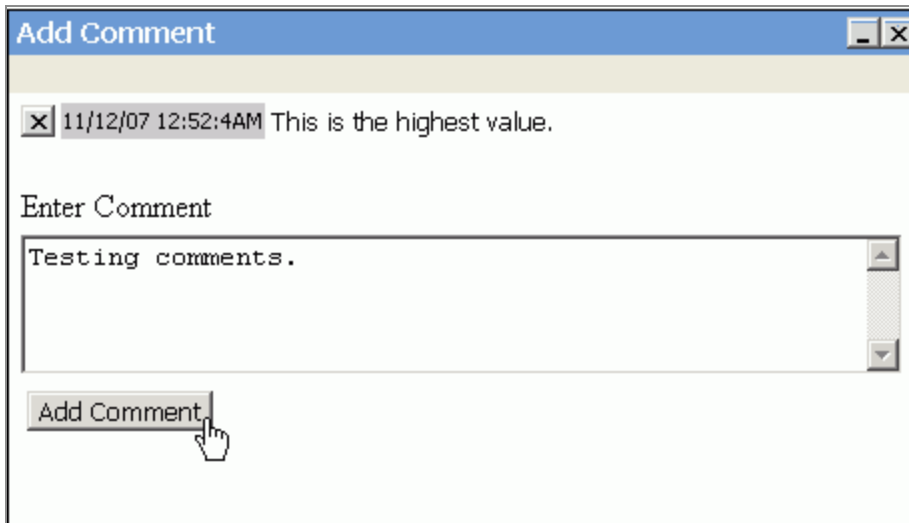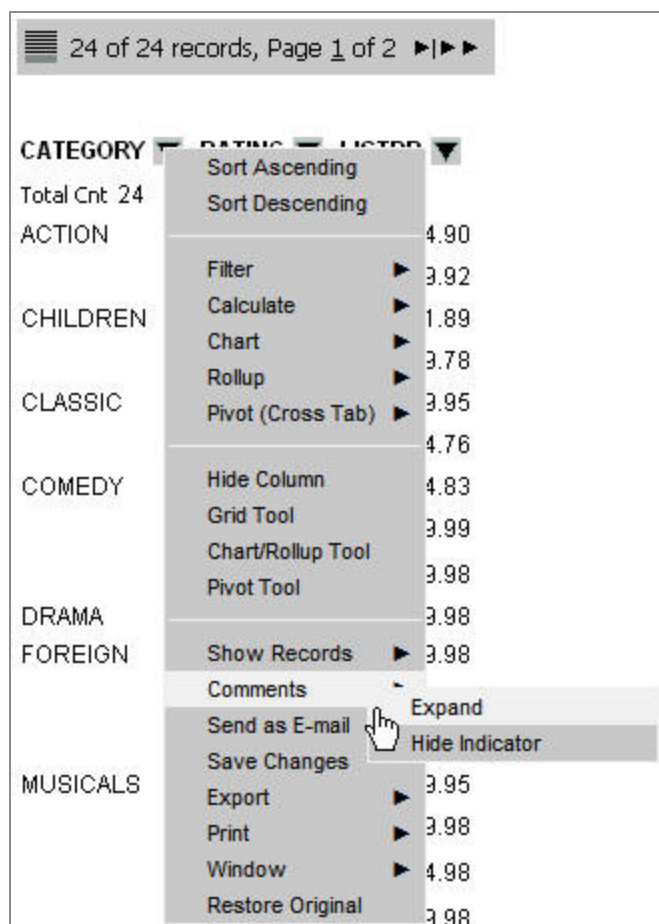
2. Type in a comment in the **Enter Comment** field.

3. Click **Add Comment** to add the entry and close the dialog box.

   An asterisk (*) indicates that there is a comment in the row.
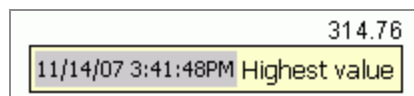
4. To view existing comments:
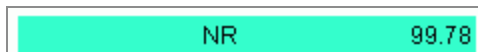
   - Click the row with comments, and select **Comments** from the context menu.

     The Add Comment dialog box appears displaying the comment entry and the date it was created.

   - Select **Expand** from the Comments submenu of any column control.

The comment date and entry is shown in the output.

Comments cannot be edited.

5. To delete an existing comment:

- Click the row with comments and select **Comments** from the context menu.

  The Add Comment dialog box appears.

- Click the **X** next to the comment date and entry.

  The comment is removed.

- Click the **X** on the Add Comment toolbar to close the dialog box.

Highlight Values and Rows in the In-Document Analytics Report Output

To highlight a row:

Select the row of data that you want to highlight, click and select **Highlight Row** from the context menu.

The row is highlighted in an aqua color.

You may highlight multiple rows.

To highlight a value:

Select the row of data that you want to highlight, click select **Highlight Value** from the context menu.

The row is highlighted in an aqua color.

Highlight Value is only applicable for one row. When you apply Highlight Value, any other highlighted rows are unhighlighted.

You may use the context menu to highlight other rows, unhighlight the row, or unhighlight all rows.

Filter a Row in the In-Document Analytics Report Output

The filter option enables you to filter the output and only show a selected row of data.

Procedure

1. Select the row of data that you want to filter, click and select **Filter Cell** from the context menu.

    The output refreshes and only shows the filtered row of data.

2. Select **Remove Cell Filter** from the context menu to remove the filter and return to

the original output results.

Calculating Data

You can perform calculations on data in an In-Document Analytics report. Types of calculations that you can apply are:

- Count all, which counts the number of occurrences of the field.

- Count distinct, which counts the number of distinct values within a field.

- Recomputes to show totals for columns containing numeric values, and recalculate temporary fields containing information, such as ratios using subtotals, each time a specified sort field changes values.

- Summarize to recalculate a computed field at every sort break.

For numeric fields you can also apply:

- Sum, which sums the values of all the fields in the column.

- Avg, which computes the average value of the field.

- Min, which generates the minimum value of the field.
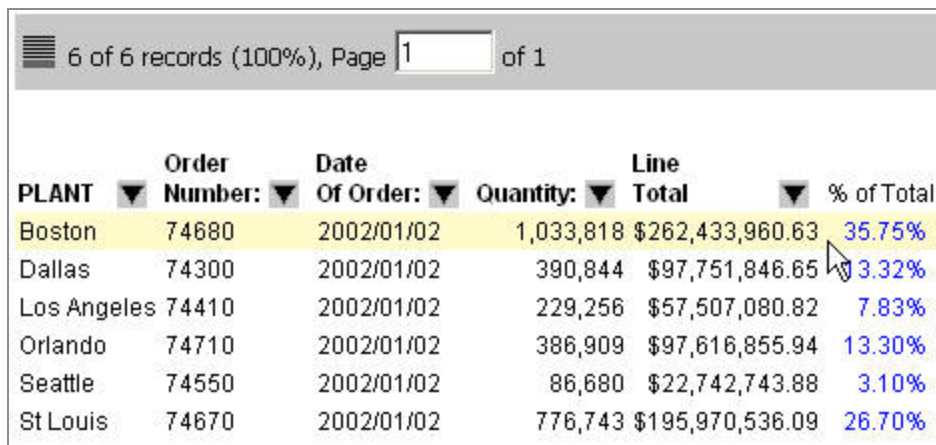
- Max, which generates the maximum value of the field.

- % of Total, which computes the percentage of a field, based on the total values for the field.

Calculations are applied to the entire data set and to the filtered data in the report. What this means is that reports that have filters applied will have multiple results appear for calculations. The first is the calculation for the visible data (that is the data that currently appears in the report output). The second is the result for all values in the report even if they are filtered out.

Calculations appear in the top or bottom row of the report. When a filter is applied, you can toggle between different displays of calculated data. Calculations are not recalculated on page breaks. Some calculations may initially appear in your report. You can change these.

Calculations on data in the Scientific Notation format are not supported.

The following image shows a report where calculations appear in the top row. If you select the % of Total calculation, the results appear in a new column to the right of the selected column. For example, as shown in the following image, the % Total calculation is selected for the Line Total field.

6 of 6 records (100%), Page 1 of 1					

PLANT	Order Number:	Date Of Order:	Quantity:	Line Total	% of Total
Boston	74680	2002/01/02	1,033,818	$262,433,960.63	35.75%
Dallas	74300	2002/01/02	390,844	$97,751,846.65	3.32%
Los Angeles	74410	2002/01/02	229,256	$57,507,080.82	7.83%
Orlando	74710	2002/01/02	386,909	$97,616,855.94	13.30%
Seattle	74550	2002/01/02	86,680	$22,742,743.88	3.10%
St Louis	74670	2002/01/02	776,743	$195,970,536.09	26.70%

Calculate Data in an In-Document Analytics Report

Click the arrow in the heading of the column that you want to calculate, click **Calculate** and then the operation.

Calculation results appear in the top or bottom row of the report, depending on how the report is designed.

Clear Calculations

Click the arrow in the heading of the column where you want to clear calculations. Select **Calculate**, then **Clear** (to clear the calculation for the individual column) or **Clear All** (to clear all calculations).

Recompute a BY Sort Field in an In-Document Analytics Report

Recompute recalculates values only at the specified sort break.

Procedure

1. Select a By sort field in the Report Painter window.

2. Choose **Recompute** from the Insert menu.

    The recomputed field appears in the Report Painter window, indicated by the word *TOTAL.

3. You can add to or type over *TOTAL.

Result

The following image is an example of an HTML In-Document Analytics report (AHTML) with Rating as the RECOMPUTE field.

| | 5 of 5 records (100%), Page 1 of 1 |

	CATEGORY				
	ACTION		CHILDREN		CLASSIC
		SUM		SUM	
RATING ▼	COPIES ▼	LISTPR ▼	COPIES ▼	LISTPR ▼	COPIES ▼
G	.	.	7	101.89	3
*TOTAL G	0	.00	7	101.89	3
NR	.	.	5	99.78	18
*TOTAL NR	0	.00	5	99.78	18
PG	4	34.90	.	.	.
*TOTAL PG	4	34.90	0	.00	0
PG13	.	.	.	.	.
*TOTAL PG13	0	.00	0	.00	0
R	10	59.92	.	.	.

Summarize a Sort Field in an In-Document Analytics Report

Summarize recalculates values at all outer sort breaks.

Procedure

1. Select a By sort field in the Report Painter window.

2. Choose **Recompute on all outer sort fields** from the Insert menu.

    The recomputed field appears in the Report Painter window, indicated by the word *TOTAL.

3. You can add to or type over *TOTAL.

Result

The following image is an example of an HTML In-Document Analytics report (AHTML) with Rating as the Summarized field.

Sorting Data

You can sort data in any column of an In-Document Analytics report in ascending or descending order.

Click the arrow in the heading of the column that you want to sort and select **Sort Ascending** or **Sort Descending**.

You can also sort data by adding a Table of Contents (TOC). The TOC enhances the display of groups of data. You can view one section of a report at a time, or you can view all sections at once.

Add a Table of Contents to a Sort Field

You can enhance navigation within a large executed report by adding a dynamic based Table of Contents (TOC). To take advantage of this feature, the report must contain at least one vertical sort (By) field.
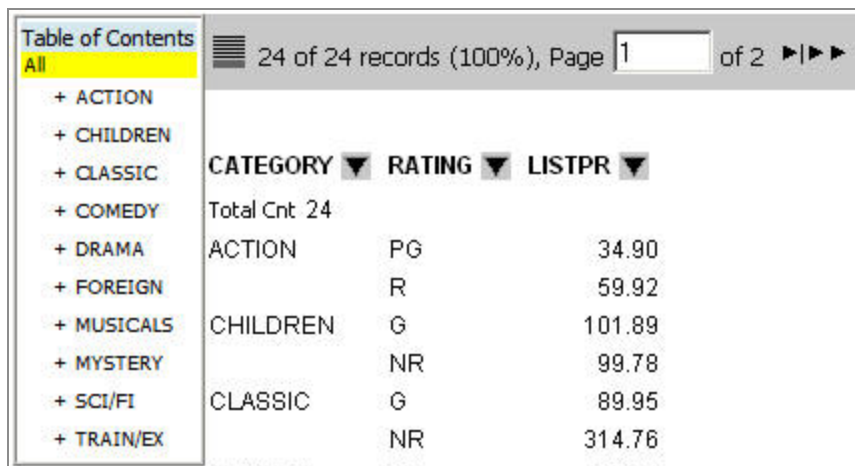
Procedure

1. From the Report Painter, right-click a By column in the report and select **Table of**

Contents.

2. Select **Report** to embed the TOC in the executed report.

3. Run the report to see the Table of Contents in the report output.

   The following image is an example of an HTML In-Document Analytics report with a Table of Contents sort option.

4. To remove the Table of Contents, right-click the (By) sort field and select **None** from the Table of Contents context menu.

   You may also select the Table of Contents options by using the General Tab of the Fields Properties dialog box. Right-click the (By) sort field, select **Options**, and click the Table of Contents options from the General tab.

Add a Table of Contents to a Sort Field

You can enhance navigation within a large executed report by adding a dynamic based Table of Contents (TOC). To take advantage of this feature, the report must contain at least one vertical sort (By) field. Add the following command to the report request:

```
ON TABLE SET COMPOUND 'BYTOC n'
```

where:

n

> Represents the number of vertical sort (BY) fields to include in the TOC, beginning with the first (highest-level) sort field in the request. The hierarchy of sort fields is determined by the order in which they are specified in the request.
>
> The default value is 1, meaning that only the highest-level sort field and its values are displayed in the TOC. You can omit the single quotation marks if you omit the **n**.

The following image is an example of an HTML In-Document Analytics report with a Table of Contents sort option.

Using Tab Window Navigation

Tab window navigation options are available when multiple Windows are open in the In-Document Analytics report within a Web browser.

Use Tab Window Navigation in an In-Document Analytics Report
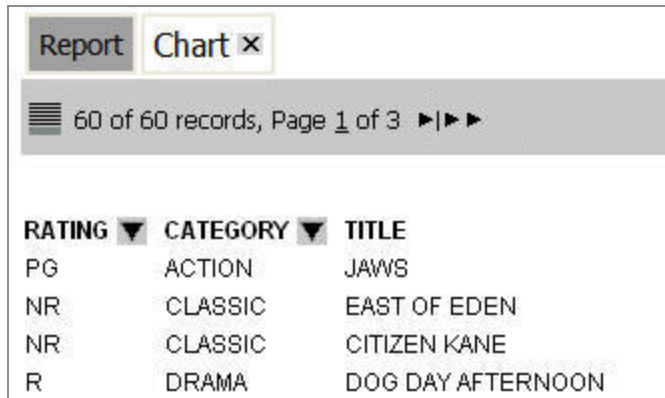
Procedure

1. Run the In-Document Analytics report and open multiple Windows by viewing the data as a chart, or in a Rollup Table, and so on.

2. Click the arrow in any column heading and select Window.

3. Select **Tabs** from the Window submenu.

Tabs show the open Windows as tabs across the top of the In-Document Analytics report. Click the tabs to navigate between the open Windows.

4. Select **Cascade** from the Window submenu to turn off tabs and return to the default window navigation.

   You may also select Restore Original from any column heading to return to the original view of the In-Document Analytics report.
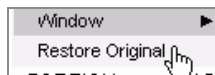
Controlling Report Display

You can control the columns and subtitles that appear and the number of records that appear in an In-Document Analytics report. When you hide a column in an In-Document Analytics report, you can still filter and highlight the report based on values in the hidden column. Hide respects all other report functions. For example, if you have a filter or calculation applied to a report and then you hide a column, the calculations and filters remain unchanged.

You can also freeze report columns so you can keep some data stationary while you scroll to the right in the report output.

Show/Hide Report Columns

Click the arrow in the heading of the column that you want to hide and select **Hide Column** from the menu.

You can restore hidden fields by clicking the arrow in the heading of the column and selecting **Show Columns**, then **Unhide All** or a particular field name.

Show/Hide Subtitles for SubHeadings or SubFootings

Click the arrow in the heading of the column and select **Hide Subtitles** from the menu.

You can hide subtitles from any sort column in the report. However, when you sort the report with any other column besides the first sort column, subtitles automatically disappear.

You can restore hidden subtitles by clicking the arrow in the heading of the column and selecting **Show Subtitles**.

The Hide/Show Subtitles option appears when a SubHeading or SubFooting column is available in the report.

Control the Number of Records

Click the arrow in any column heading and then select **Show Records** and a value from the pop-out menu.

The report shows the number of records that you select. All report information appears in the record status and page navigation bar, which can be moved from the top to the bottom of the report by clicking the pagination ▤ icon.

Important:

- The Default option shows the number of records per page that were set by the report developer.

- If a filter has been applied, the Show all option displays only the filtered records.

Freeze Report Columns

Select Freeze options from the column pop-up menu.

Note that Freeze options are only available when a report does not fit in the current window. Therefore, if your report fits in the current window, Freeze options are unavailable in the menu. If you resize the report, or a column or row extends beyond the proportion of the window, then Freeze options become activated and are available for use.

Pop-up menus sometimes get cut off when freezing columns, depending on which column is frozen and how wide it is.

Using Data Visualization

Data visualization, or peer graphics, enable you to visually compare the values of numeric columns. When you select the visualization option, bars that reflect the value of the data display in a column to the right of the data. Data visualization bars do not represent true proportions. They are algorithmically scaled to be relative to the other values in the column to make comparisons of similar values simple.

Data visualization bars update dynamically when you add a filter to the report. You can toggle between visualization of filtered data or total data.

The following report shows the Quantity field with visualization applied.

Apply Data Visualization

Click the arrow in the heading of the column that you want to visualize and select **Visualize** from the menu.

The Visualize option only appears for numeric columns.

Viewing Data as a Chart

You can view data in your In-Document Analytics report as a line, bar, scatter, or pie chart. For example, the following image shows an HTML In-Document Analytics report.

The following image shows a chart that was rendered from the data in the report. This is a pie chart that shows the sum of the values in the Quantity field by Plant.
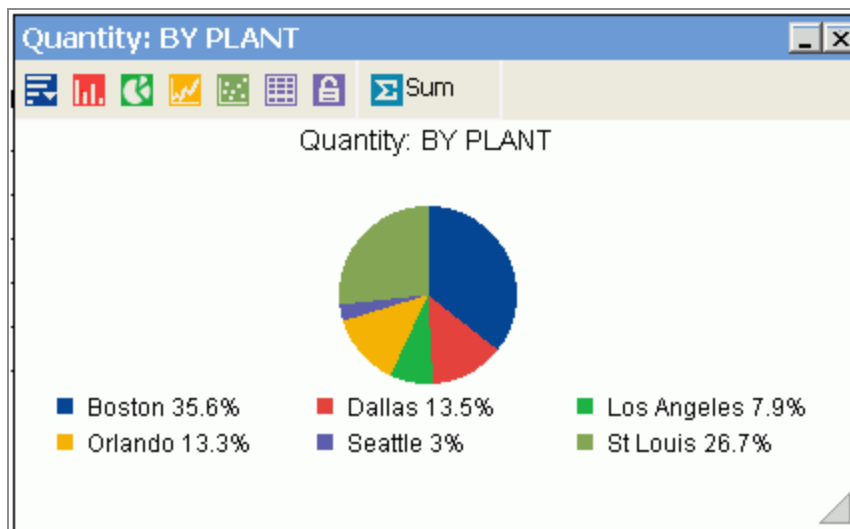
Once a chart is rendered, you can use the chart icons as follows.

Chart Icon	Action
	Create new charts to compare values, especially when using the Freeze options. Change or add fields. You can only add fields to a bar or line chart. Export charts to another application or open the Chart/Rollup Tool.
	Change the chart type to a bar chart.
	Change the chart type to a pie chart.
	Change the chart type to a line chart.
	Change the chart type to a scatter chart. Scatter charts are available for numeric columns.
	View the chart as a report in table format.
	Freeze Chart. You can link or unlink a chart to the filters you have applied in your report using the Freeze Chart button. The button indicates whether the report is linked to the filter (Freeze Chart) or not (UnFreeze Chart).
	Change the aggregation method.

View Data in a Chart

Procedure

1. Click the arrow in the heading of the column that you want to chart and select **Chart**.

2. Select the chart type (Pie, Line, Bar, Scatter) from the menu.

Scatter charts are available for numeric columns.

The menu that appears shows you how the chart is going to be created. The first row tells you the calculation, for example Group By (SUM), then the following rows list the vertical (By) sort fields in the report that you can select for the X-axis. The column title you clicked on is the field that displays on the Y-axis.

3. Select a sort field.

    The chart is rendered. You may create a new chart from the chart window, create a Rollup Table, change the type of calculation for the column, and view data tips for the chart items.

    > ✅ **Tip:** To view data tips in a chart, hover your mouse over the pie slice (or column, or dot, depending on your chart type), to view the data tip for the field. For example, the following image shows a data tip for a column in a bar chart.
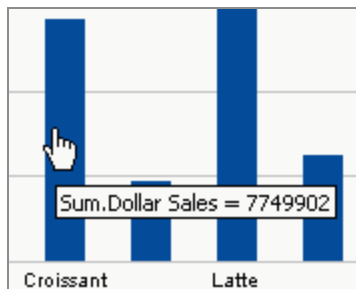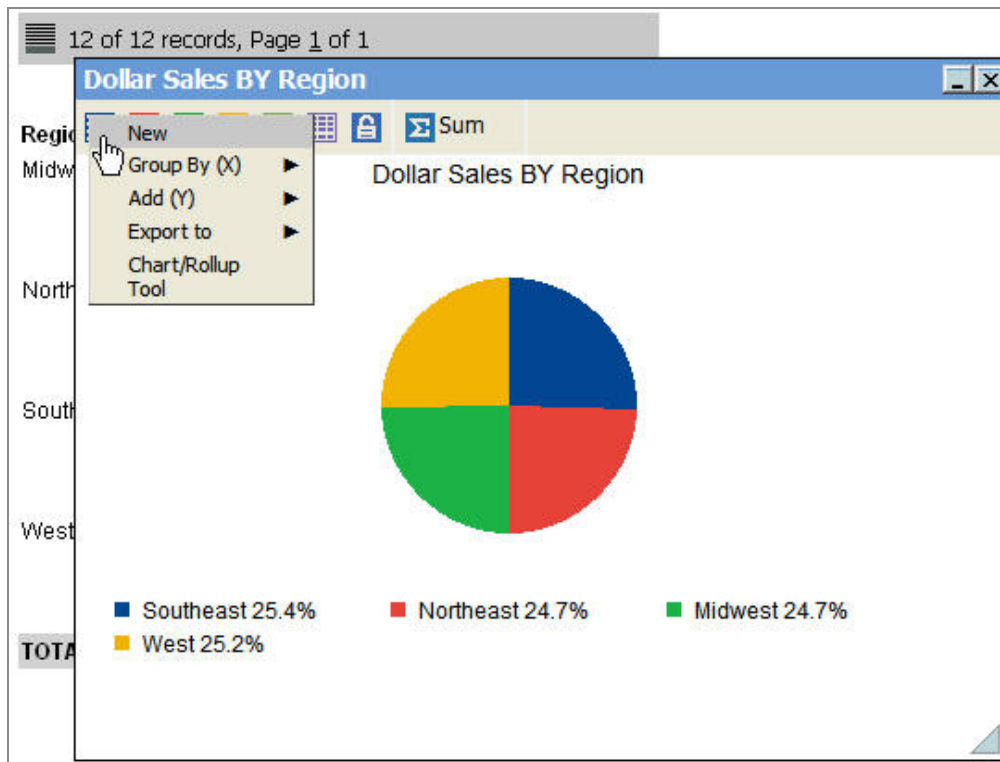

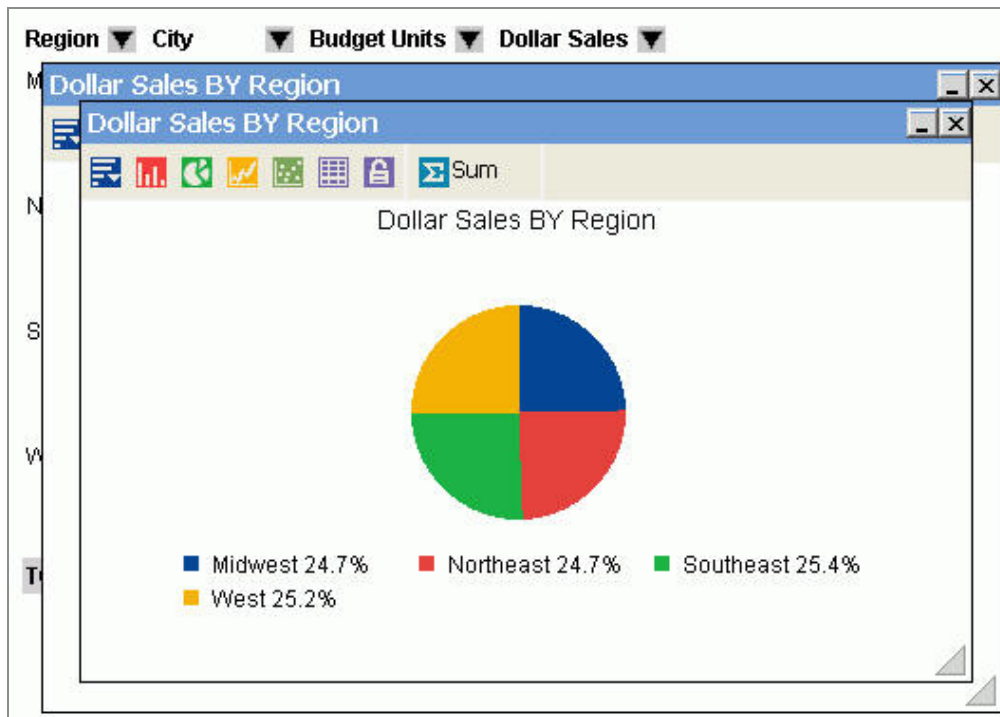   If you click on a column, the data tip includes the column data and name, as shown in the following image.
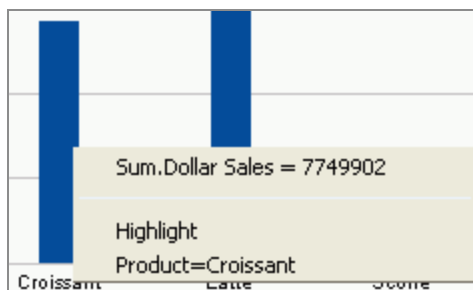
Create New Charts From a Chart Window

Procedure

1. From a chart window in the In-Document Analytics report output, select **New** from the first chart icon.

Another chart window opens with the same chart.

2. Select the **Freeze** icon to unlink the chart to the filters you applied in your report.

   Any additional filters that you apply do not affect this chart window.

   Select the **Freeze** icon again to unfreeze the chart and link the chart to the report when new filters are applied.

3. Change the type of calculation for data in the column.

   You can select **Sum, Avg, Min, Max, Count**, or **Distinct** as the aggregation method (calculation type) for numeric data. You may select **Count** or **Distinct** as the aggregation method (calculation type) for non-numeric data.
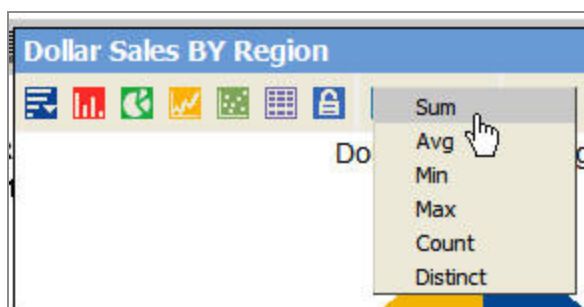
   For information about the available types of calculation in In-Document Analytics reports, see Calculating Data.

Usage Notes for Charts

The following apply to charts.

- X-axis labels overlap and are cut off when you reduce the size of a chart.

- If there are multiple Y-axis fields for a pie chart, the chart uses the first field selected to draw the chart. If adding multiple Y-axis fields to draw the pie chart from the chart window, the chart uses the first Y-axis field selected to draw the pie chart.

- Scatter charts can represent only detailed data (numeric) without any aggregation method applied.

- When you create a pie chart using the HTML In-Document Analytics report output format (AHTML), the values are sorted alphabetically in the pie slices clockwise, from left to right.

Viewing Data in a Rollup Table

You can view data in an In-Document Analytics report in a Rollup Table. For example, the following image shows a partial In-Document Analytics report that has the Order Number, Date of Order, Line Total, and Quantity sorted by Plant and by Product. If you need to see only the quantity in stock for each plant, you can create a Rollup Table with only those fields, as shown in the following image.

Create a Rollup Table

Procedure

1. Click the arrow in the heading of the column you want to create a Rollup Table for and select **Rollup**.

2. Select the sort field from the submenu.

The Rollup Table appears in a separate window.

Viewing Data in a Pivot Table

Pivot Tables reorganize and summarize selected columns and rows of data in order to obtain a desired report. A Pivot Table pivots, or turns, the data to view it from different perspectives, without actually changing the data from the report.

Create a Pivot Table in an In-Document Analytics Report

Procedure

1. Run the In-Document Analytics report, click the arrow in any column heading, and select **Pivot (Cross Tab)**.

2. Select a column, and row, respectively, from the Pivot (Cross Tab) submenu.

The selected column is the vertical sort field and the selected row is the horizontal sort field in the Pivot Table.

The Pivot Table appears in the same Web browser session.

The Pivot Table inherits the style used in the original In-Document Analytics report.

You may use the Pivot controls and Pivot Table menu options to select additional values and calculations.

Pivot Table Menu Options

The following image is an example of a Pivot Table for an HTML In-Document Analytics report.

The following icons are available from the Pivot Table:

New

> The New ⊟ icon opens a new window with the same Pivot Table. This Pivot Table window can be used to compare values, especially when you use the Freeze option.
>
> Add additional vertical sort fields (Add (Y)) and horizontal sort fields (Group By (X)) to the Pivot Table.
>
> You may also export the Pivot Table to another application and open the Pivot Tool.

Freeze

> Select the Freeze 🔒 icon to keep the Pivot Table frozen so that additional selection criteria does not reflect in the Pivot Table.
>
> Select the Freeze icon again to unfreeze the table and reflect new selection criteria in the Pivot Table.

Calculation

> The Calculation Σ icon identifies the calculation value for the Pivot Table. Options are Sum, Avg, Min, Max, Count, and Distinct.

Sum is the default calculation value.

Pivot Controls

The Pivot Table has individual controls for each sorting column or row. These controls enable you to alternate the sorting to analyze the data. The following image is an example of the Pivot controls in a Pivot Table.

The following controls are available from the Pivot Table.

Button	Control
	Moves a column sort to a row sort or vice versa.
	Up/Down arrows enable you to switch the order of the sorts and moves the column to a new position in the Pivot Table.
	Arrows are grayed out if there is only one sort column.
	Right/Left arrows enable you to switch the order of the sorts and moves the row to a new position in the Pivot Table.
	Arrows are grayed out if there is only one sort row.
	Deletes the column or row from the Pivot Table.

Working With an Accordion In-Document Analytics Report

An accordion report is a report that has expandable views of data for each vertical (By) sort field. Only data values of the first (highest-level) vertical sort field are shown initially for accordion reports. All other data is hidden.

You can use an inner sort with accordion reports, where the sort column values are sorted within the parent to which they belong. To sort on all values in the report, you must first expand all data in the report.

Expand Data in an Accordion In-Document Analytics Report

You can expand your view to expose data values of lower-level sort fields, either manually by clicking the plus signs (+) or if you are viewing an accordion report.

Click the arrow in a column heading. From the Accordion menu, select **Expand All**.

Using the Grid Tool

The Grid Tool enables you to change the column order, select multiple columns to sort ascending or descending, hide and show columns, add a calculation result to a column, and add subtotals in the In-Document Analytics report.

This topic describes how to show the Grid Tool menu option when an In-Document Analytics report is run, and how to use the Grid Tool.

The Grid Tool is available as long as you do not include the following StyleSheet declaration in the request:

```
TYPE=REPORT,ALLOW-GRID=OFF,$
```

Show the Grid Tool Menu Option for an In-Document Analytics Report

Procedure

1. Create a report in the .

2. From the Report menu, select **Output**.

    The Report Options dialog box opens.

3. From the Output Format drop-down list, select HTML In-Document Analytics report (AHTML).

4. On the Report Options dialog box, click the **Format** tab.

    The Format tab of the Report Options dialog box provides options for formatting an In-Document Analytics report.

5. In the Menu options section, to the right of the User type drop-down list, click the ellipsis button.

    The Customize User Interactivity dialog box opens, enabling you to customize the options for each user type.

    The following image shows the options on the Customize User Interactivity dialog box for a Power user. The Grid Tool check box is located at the lower right of the dialog box. For a Power user, the Grid Tool is selected by default. For an Analytical or Business user, the Grid Tool is deselected by default.
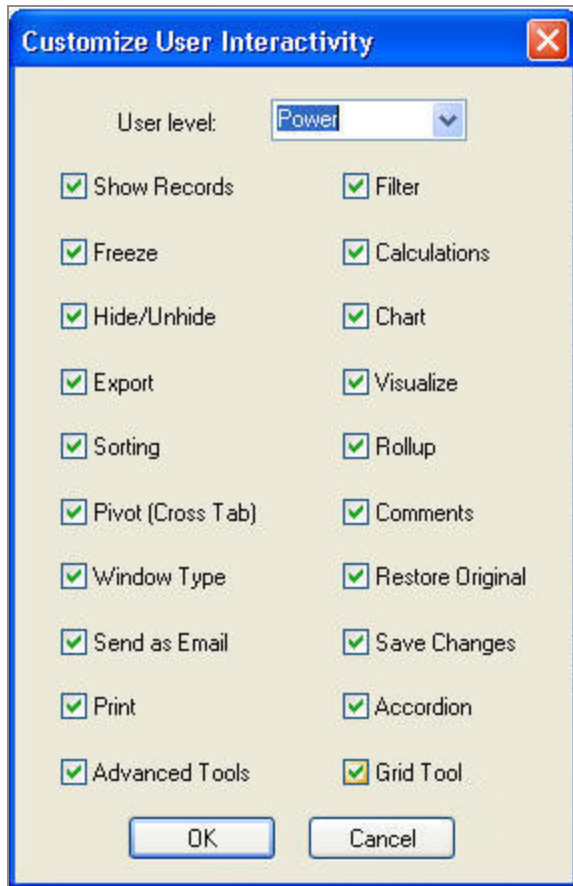
> ✔ **Tip:** The Advanced Tools include the Grid Tool, the Pivot Tool, and the Chart/Rollup Tool. The Advanced Tools check box at the lower left of the Customize User Interactivity dialog box controls the display of the menu options for all three tools when an In-Document Analytics report is run.

6. Locate the **Grid Tool** check box, and do one of the following.

   - Select the **Grid Tool** check box to show the Grid Tool menu option for the In-Document Analytics report at run time. Click **OK**.

   - Deselect the **Grid Tool** check box to hide the Grid Tool menu option at run time, and click **OK**.

7. Click **OK** on the Report Options dialog box to close it.

8. Run the In-Document Analytics report.

   Click the arrow in any column heading of the In-Document Analytics report to display

a menu of options.

- If you selected the check box for the Grid Tool on the Customize User Interactivity dialog box, you will see the Grid Tool option on the menu, as shown in the following image.

- If you deselected the check box for the Grid Tool on the Customize User Interactivity dialog box, you will not see the Grid Tool option on the menu when you click the arrow in a column heading.

Use the Grid Tool

Procedure
1. Run the In-Document Analytics report, click the arrow in any column heading, and select **Grid Tool**.

   The Grid Tool opens, as shown in the image below.
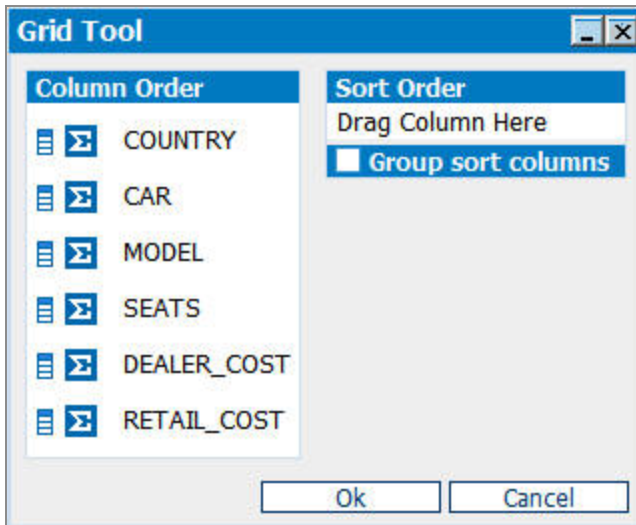
The columns are displayed in the order that they appear in the In-Document Analytics report.

> ✓ **Tip:** You may left-click and drag the columns in the Column Order section to reorder the list.

2. To hide or show columns, click the **Hide Column** icon next to the column name.

   By default, the Grid Tool displays Hide icons for the hidden fields (HIDE=ON StyleSheet setting) and NOPRINT fields in the procedure. The Grid Tool displays Show icons for anything else.
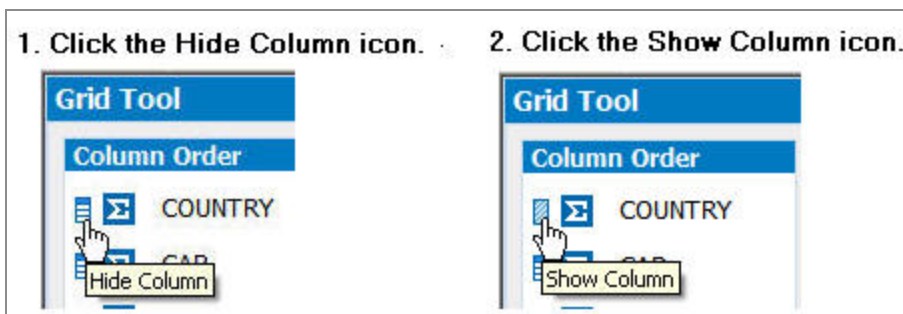
3. To add a calculated result to the column, click the calculation icon next to the column name. You may assign a different calculation result for each field.

   There are no calculations set by default.
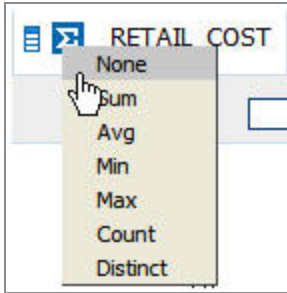
- Sum, Avg, Min, Max, Count, or Distinct are available for numeric fields.

- Min, Max, Count, or Distinct are available for Date type fields.

- Count or Distinct are available for non-numeric alpha string fields.

- None indicates that there will be no aggregation performed or applied for the column in the report. When None is selected, Detail appears next to the calculation icon, implying that the report will display detailed data for this column in the report.

4. Left-click and drag the columns from the Column Order into the Sort Order section. You may also double-click to add columns.

   When columns are added to the Sort Order section, options for sorting ascending or descending appear. The default sort order is ascending, lowest to highest (A to Z). Click the sort order icon to switch to descending, highest to lowest (Z to A).

   In the example below, COUNTRY is descending and CAR is ascending.
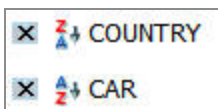
5. You may edit the sort fields by clicking the X icon to delete columns, drag multiple columns into the Sort Order section, reorder the sort fields, and group sort columns.

6. Click **Group sort columns** to group the report by columns in the Sort Order section.

   A Subtotal column appears in the Sort Order section. No subtotals are selected by default.

   When Group sort columns is selected, the columns in the report are grouped by the order specified in the Sort Order section. These columns are repositioned to the beginning of the report and override the Column Order list.

7. To add a subtotal for an aggregated column.

- Select the **Subtotal** check box next to the column name.

- Click **Group sort columns** again to hide the Subtotal column.

In the following example, MODEL and SEATS are hidden, DEALER_COST and RETAIL_ COST have a Sum aggregation type, COUNTRY, CAR, MODEL, and SEATS appear in the Sort Order column, Group sort columns is selected, and Subtotal is applied to CAR.
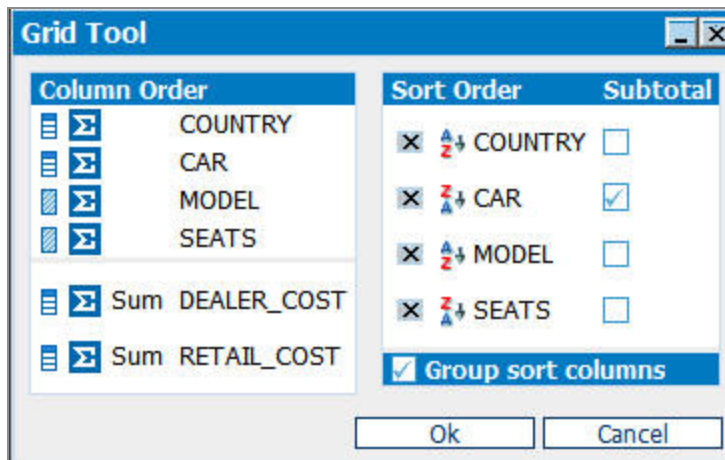
8. Click **OK** to close the Grid Tool.

The In-Document Analytics report is generated based on the sort fields selected.

In the example below, the subtotal of sum values appear under DEALER_COST and RETAIL_COST by the CAR field. You may select **Grid Tool** from the column menu to open the Grid Tool again.

☰ 18 of 18 records, Page 1 of 1			
COUNTRY ▼	CAR ▼	DEALER_COST ▼	RETAIL_COST ▼
		Total Sum 143,794	Total Sum 173,204
ENGLAND		4,292	5,100
		4,292	**5,100**
		14,940	17,850
		14,940	**17,850**
		7,427	8,878
		11,194	13,491
		18,621	**22,369**
FRANCE		4,631	5,610
		4,631	**5,610**
ITALY		25,000	31,500
		25,000	**31,500**
		4,915	5,925
		5,660	6,820
		5,660	**6,820**
		16,235	**19,565**
JAPAN		2,886	3,339
		2,886	**3,339**
		2,626	3,139
		2,626	**3,139**
W GERMAN		5,800	5,940

Context menu overlaid on table:
- Sort Ascending
- Sort Descending
- Filter ►
- Calculate ►
- Chart ►
- Rollup ►
- Pivot (Cross Tab) ►
- Hide Column
- Show Columns ►
- Freeze Column
- Unfreeze All
- Grid Tool
- Chart/Rollup Tool
- Pivot Tool
- Show Records ►
- Comments ►
- Send as E-mail
- Save Changes
- Export ►
- Print ►
- Window ►
- Restore Original

Grid Tool Usage Notes

The following apply when you use the Grid Tool in In-Document Analytics reports:

- The same column can appear in both the Column Order and Sort Order section.

- Column Order displays the order of how columns appear in the report, unless Group sort columns is selected. The Sort Order list overrides the Column Order if Group sort columns are selected.

- The Column Order and Sort Order sections can contain field names in a different order, as long as Group sort columns is not selected.

- Columns can be dragged from Column Order to Sort Order but they cannot be

dragged from Sort Order to Column Order.

- Sort ascending is the default sort order, when columns are added to the Sort Order section.

- There are no calculations set by default. Sum, Avg, Min, Max, Count, or Distinct are available for numeric fields. Min, Max, Count, or Distinct are available for Date type fields. Count or Distinct are available for non-numeric alpha string fields. None indicates that there will be no aggregation performed or applied for the column in the report.

- When the Subtotal option is selected and an aggregation type is selected in the Column Order, subtotals display by the corresponding sort field (for the fields that have calculations specified).

- Total plus the aggregation type (Cnt, Sum, and so on) appears with the column in the report output when Subtotal is selected.

- You may not add additional columns to Sort Order once Group sort columns is selected. Deselect **Group sort columns** to add additional columns.

- If a column is hidden and appears in the Sort Order section, the subtotal value will also be hidden if Group sort columns is selected.

- When a filter is applied to the report, the subtotal will display the filtered value.

- Subtotals are not supported with date fields.

- The In-Document Analytics report Sort Ascending and Sort Descending menus will override the options set in the Sort Order section of the Grid Tool.

- The subtotal background color and font color can be changed by using CALC-AREA object in the STYLE section of the procedure. For example:

```
TYPE=REPORT,OBJECT=CALC-AREA,COLOR=WHITE,BACKCOLOR=BLACK,$
```

- The font style for the subtotal values can be changed by using TITLE type in the STYLE section of the procedure. For example:

```
TYPE=TITLE,FONT='GEORGIA',COLOR=RGB(78 137 187),$
```

Using the Chart/Rollup Tool

The Chart/Rollup Tool enables you to select multiple group fields in the Chart or Rollup Table generated.

The Chart/Rollup Tool contains a list of columns available in the In-Document Analytics report and Group By and Measure sort fields. Click and drag the columns into the desired sort field.

Use the Chart/Rollup Tool

Procedure

1. Run the In-Document Analytics report, click the arrow in any column heading, and select **Chart/Rollup Tool**.

   The Chart/Rollup Tool opens, as shown in the image below.
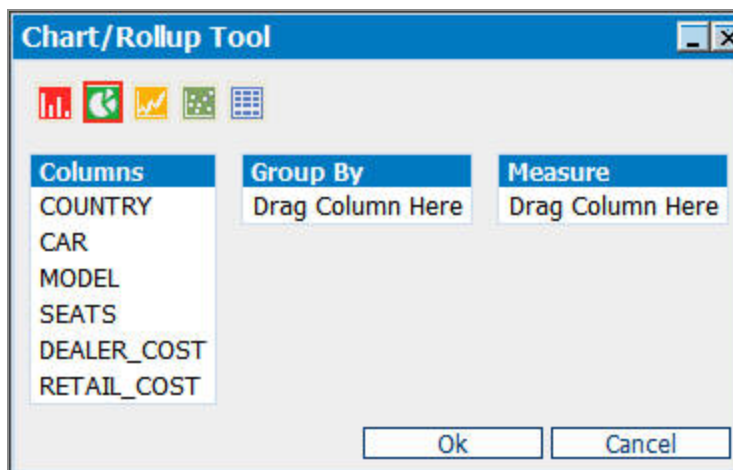
2. Left-click and drag the columns into the Group By and Measure sort fields.

   For charts, Group By is the column(s) used for the X-axis and Measure is the column (s) used for the Y-axis.

3. You may edit the sort fields by clicking the X icon to delete columns, drag multiple columns into the Group By and Measure sort fields, reorder the sort fields, and change the aggregation type of the Measure by clicking the Calculation icon.

4. You can select the Line, Pie, Bar, Scatter, or Rollup icon.

The pie chart is selected by default.

In the example below, CAR and MODEL are the Group By sort fields, DEALER_COST and RETAIL_COST are the Measure fields, and the Line chart is selected.
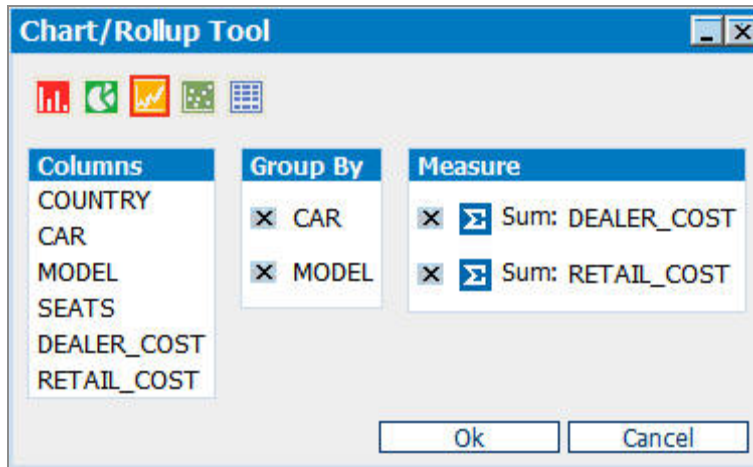
5. Click **OK** to close the Chart/Rollup Tool.

   The Chart or Rollup Table is generated based on the sort fields selected. You may click the New icon from the Chart or Rollup Table and select **Chart/Rollup Tool** to open the Chart/Rollup Tool again.
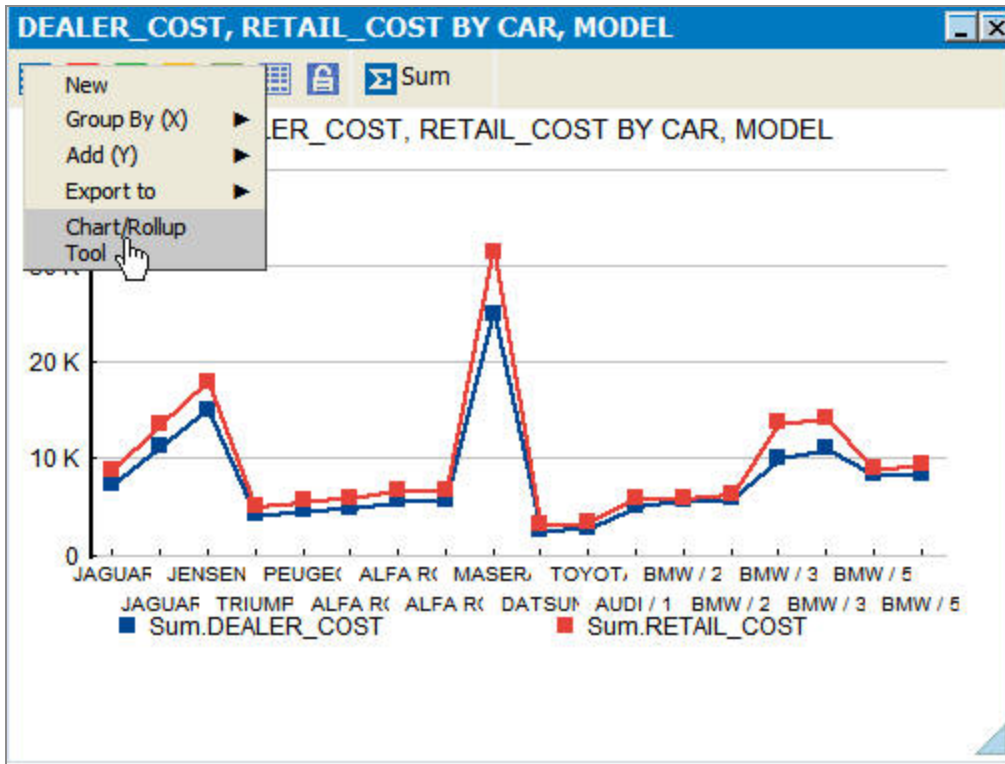
Chart/Rollup Tool Usage Notes

The following apply when you use the Chart/Rollup Tool in In-Document Analytics reports:

- The Group By and Measure sort fields are required.

- You may use multiple Group By and Measure sort fields. Group By is the column(s) used for the X-axis and Measure is the column(s) used for the Y-axis.

- You may only use one Measure sort field (such as the Y-axis) when using a Pie chart.

- The same column can appear in both the Group By and Measure sort field.

- Columns can be dragged between the Group By and Measure sections but they cannot be dragged back to the Columns section.

- The Measure sort field displays Sum for numeric fields and Count for non-numeric fields by default.

- Headings for the chart are generated using the field name, or column title name. The report HEADING is inherited only if REPORT-VIEW=CHART is set in the FOCUS procedure.

- When you use the Chart/Rollup Tool with hidden fields (HIDE=ON StyleSheet setting), the hidden columns will not be displayed in the Rollup Table. To display the hidden columns in the Rollup Table, select **Show Columns** from the In-Document Analytics report menu, and select the column name you want to display.

Using the Pivot Tool

By default, a Pivot Table groups the selected column as the vertical sort field and the selected row as the horizontal sort field. The Pivot Tool enables you to select multiple group fields in the Pivot Table generated.

Pivot Tables reorganize and summarize selected columns and rows of data to obtain a desired report. For more information, see Viewing Data as a Chart.

The Pivot Tool contains a list of columns available in the In-Document Analytics report and Group By, Across, and Measure sort fields. Click and drag the columns into the desired sort field.

Use the Pivot Tool

Procedure

1. Run the In-Document Analytics report, click the arrow in any column heading, and select **Pivot Tool**.

   The Pivot Tool opens, as shown in the image below.
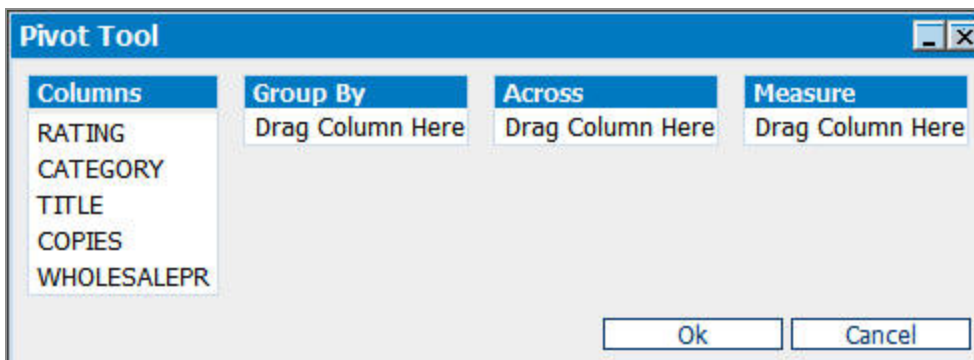
2. Left-click and drag the columns into the Group By, Across, and Measure sort fields.

A column must be included for the Group By and Measure sort fields (Measures typically define how much or how many). The Across sort field is optional.

In the example below, CATEGORY and RATING are the Group By sort field, COPIES is the Across sort field, and WHOLESALEPR is the Measure field.
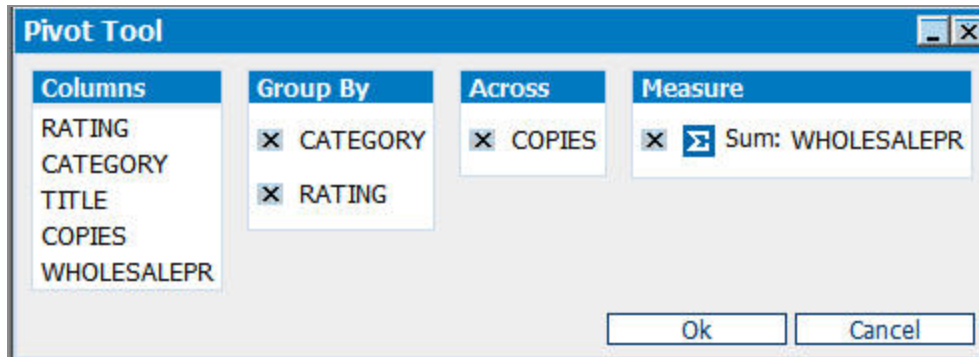

3. You may edit the sort fields by clicking the X icon to delete columns, drag multiple columns into the Group By or Across sort fields, reorder the columns in the sort fields, and change the aggregation type of the Measure by clicking the Calculation icon.

You may not use multiple Measures.

4. Click **OK** to close the Pivot Tool.

The Pivot Table is generated based on the sort fields selected. You may click the New icon from the Pivot Table and select **Pivot Tool** to open the Pivot Tool again.

Pivot Tool Usage Notes

The following apply when you use the Pivot Tool in In-Document Analytics reports:

- The Group By and Measure sort fields are required.

- You may not use multiple Measures.

- The same column cannot appear in both the Group By and Across sort field.

- Columns can be dragged between the Group By, Across, and Measure sections but they cannot be dragged back to the Columns section.

- If a column already exists in the Measure sort field, an additional column that is dropped into the Measures section replaces the existing column.

- The Measure sort field displays Sum for numeric fields and Count for non-numeric fields by default.

Saving, Exporting, and E-mailing In-Document Analytics Reports

You can save an In-Document Analytics report from your browser to another location. You can e-mail In-Document Analytics reports as an HTML attachment. You can also export data in an In-Document Analytics report to HTML, CSV (comma delimited), or XML (Excel) formats. You can export the entire data set or only filtered records. Export does not include the JavaScript that makes interaction possible due to browser security settings, only static data is exported. All data that you see in your report is exported. For example, if you have applied calculations to a column, those calculations appear in the exported data. In addition to exporting data, you may also export charts created in In-Document Analytics reports to Microsoft® Excel®, Word®, and PowerPoint®.

Save an In-Document Analytics Report

In order to save an In-Document Analytics report, ensure that your Temporary Internet Files setting is set to Automatic.

Procedure

1. From your browser File menu, use the Save Page As option. For example, in Internet Explorer, select **Save As**.

2. In the Save as type drop-down list, select **Webpage, HTML only**.

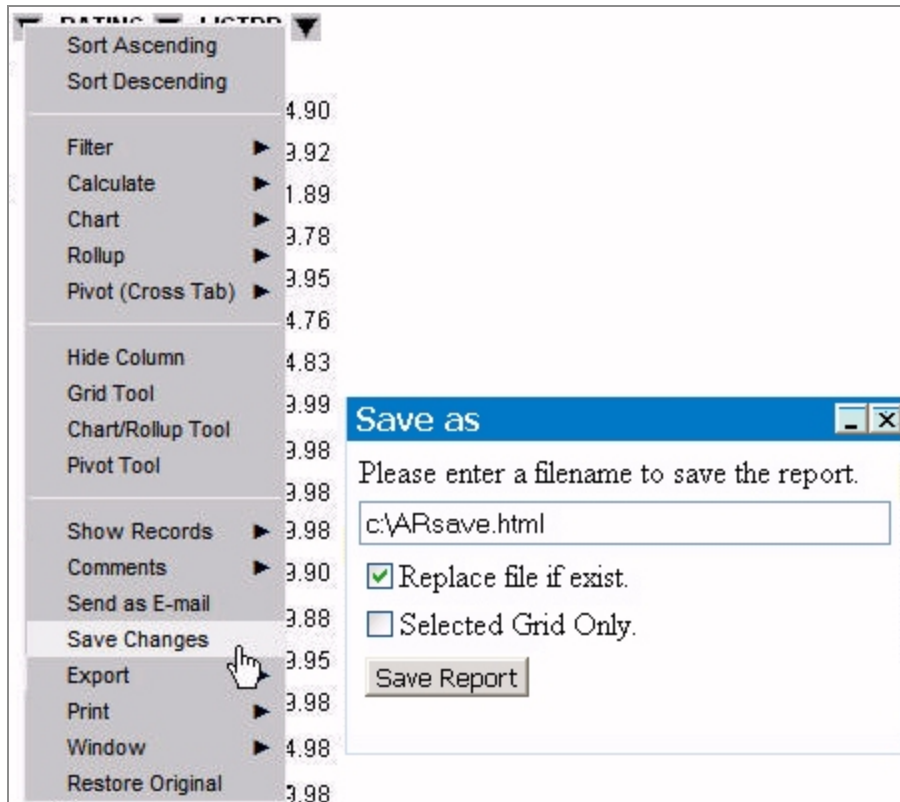# Use Save Changes in an In-Document Analytics Report

Procedure

1. Click the arrow in any column heading, select **Save Changes**.

   The Prompt dialog box opens.

   To use the Save Changes option, you must enable ActiveX® in your browser security

settings.

2. If a filter is applied to the In-Document Analytics report, Filtered Only appears as an additional option in the Save as dialog box.

   Click **Filtered Only** to save only the filtered result instead of the entire report.

3. Enter a file name and location (or keep the default) and click **Save Report**.

   The report is saved with the most recent modifications applied.

   The original report name will not show these modifications.

Print In-Document Analytics Report Data

Procedure

1. Click the arrow in any column heading and select **Print**.

   You may print All records or Filtered only.

- Select **All records** to open an HTML-formatted page, showing all records, in a new browser window.

- Select **Filtered only** to open an HTML-formatted page, showing filtered data, in a new browser window.

> **Tip:** Click the arrow in any column heading and select **Filter** to filter data. For more information about filtering, see Filtering and Highlighting Data.

2. The print dialog menu automatically appears when selecting a print option from In-Document Analytics reports.

   The data is sent to the printer.

Export Data

The Mozilla Firefox® browser and the Safari® browser do not support the Export XML (Excel) feature of HTML In-Document Analytics reports.

Using Safari as the Web browser has identical functionality to Mozilla Firefox. A limitation for both Safari and Mozilla Firefox is the unavailability of the export directly to Microsoft Excel function in the HTML In-Document Analytics report. The export directly to Microsoft Excel function in the HTML In-Document Analytics reports requires ActiveX controls, which are supported only when you use Internet Explorer as the Web browser.

The In-Document Analytics report menu options Export to HTML and Export to CSV (comma delim) export data in Unicode only. Exporting data in an encoding scheme other than Unicode is not supported. For instance, in the Save HTML Document dialog box in Internet Explorer, you must select Unicode from the Language dropdown list. The requirement that you export data in Unicode applies to all platforms.

Procedure
1. Click the arrow in any column heading, select **Export**, and then click the format.

   Formatting is only preserved for reports that are exported in HTML format. If you export data to HTML and then change the file extension in the Save as dialog box to .xls, when you open the file in Excel, it does retain all formatting.

2. Select **All Records** or **Filtered only**.

The Save as dialog box opens.

A new browser window also opens that shows the exported data. This data shows due to browser security features.

3. Navigate to a location to save the exported file, enter a name, and click **Save**.

4. A second window appears in the browser when you export content to XML (Excel). Since exporting content to Excel is done using XML, this second window appears in the browser during the export process, which performs a security check on the data. To prevent this second window from appearing, give the file name an explicit Excel extension (.XLS) in the Save dialog.

Column titles and field values for ACROSS sort fields are not exported to CSV and XML (Excel) formats.

Field formats with dollar signs and decimals are not exported to CSV and XML (Excel) formats. They are exported as plain integers.

# Export Charts to Microsoft Excel, Word, and PowerPoint

When you export charts, the selected application opens and a chart is created in a new worksheet, document, or presentation. You must use Internet Explorer as the default browser in order to successfully export data to a Microsoft Office application.

Procedure

1. Ensure that ActiveX controls are enabled in your Web browser security settings.

   a. From your Web Browser, select **Internet Options** from from Tools menu.

   b. Select the **Security Tab**.

   c. Click **Custom Levels**.

   Ensure that ActiveX controls and plug-ins are enabled.

2. Run your In-Document Analytics report and create a chart.

3. From the chart window, select the **Export To** option from the first chart icon.
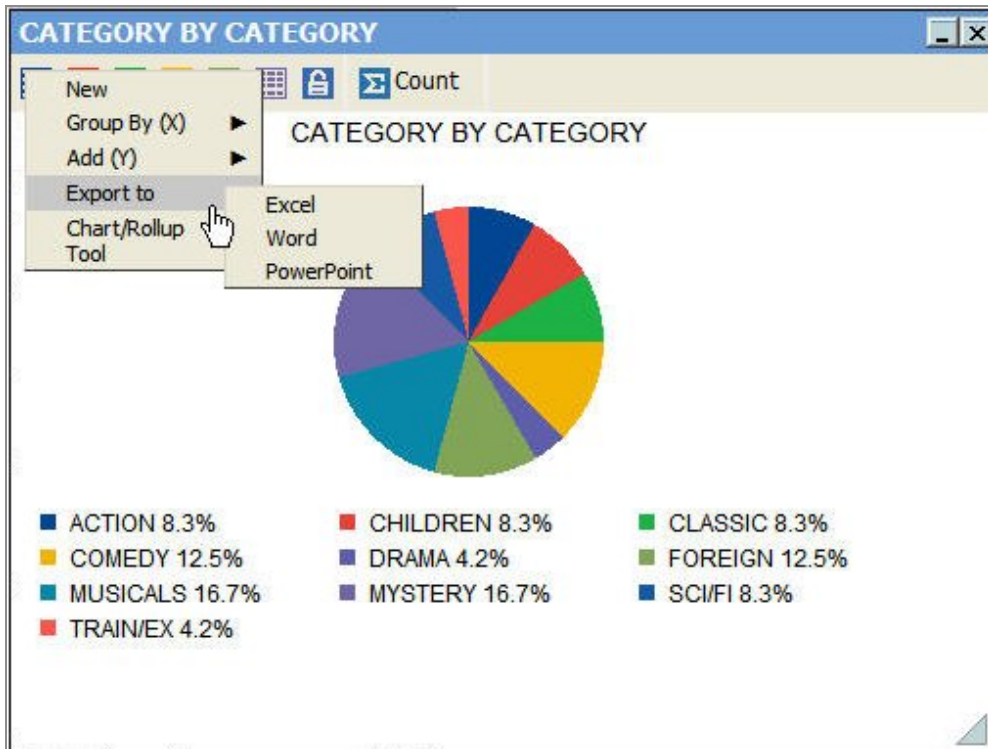
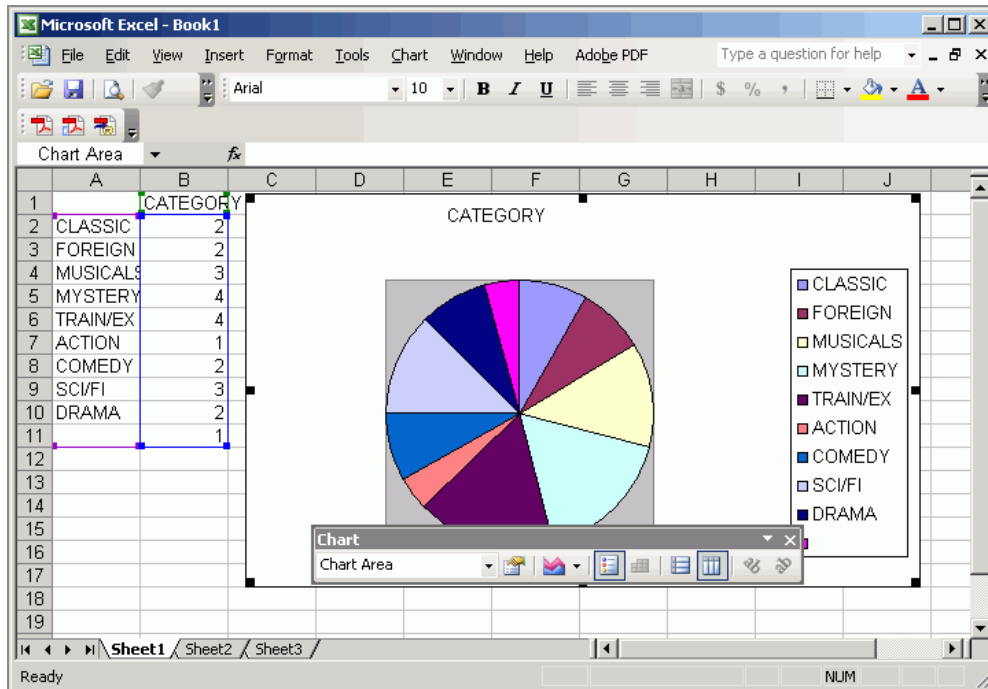4. Select **Excel**, **Word**, or **PowerPoint**.

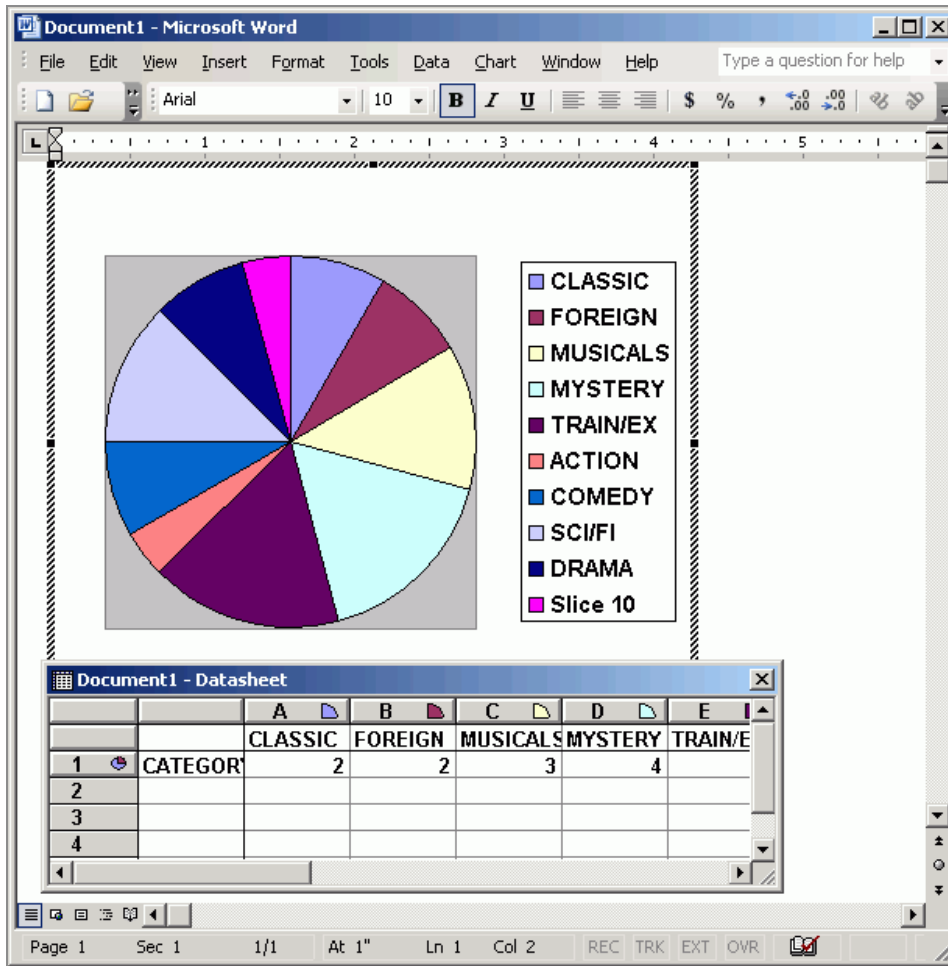   The chart is exported to the selected application.

Result

The chart opens in the corresponding Microsoft Office application.

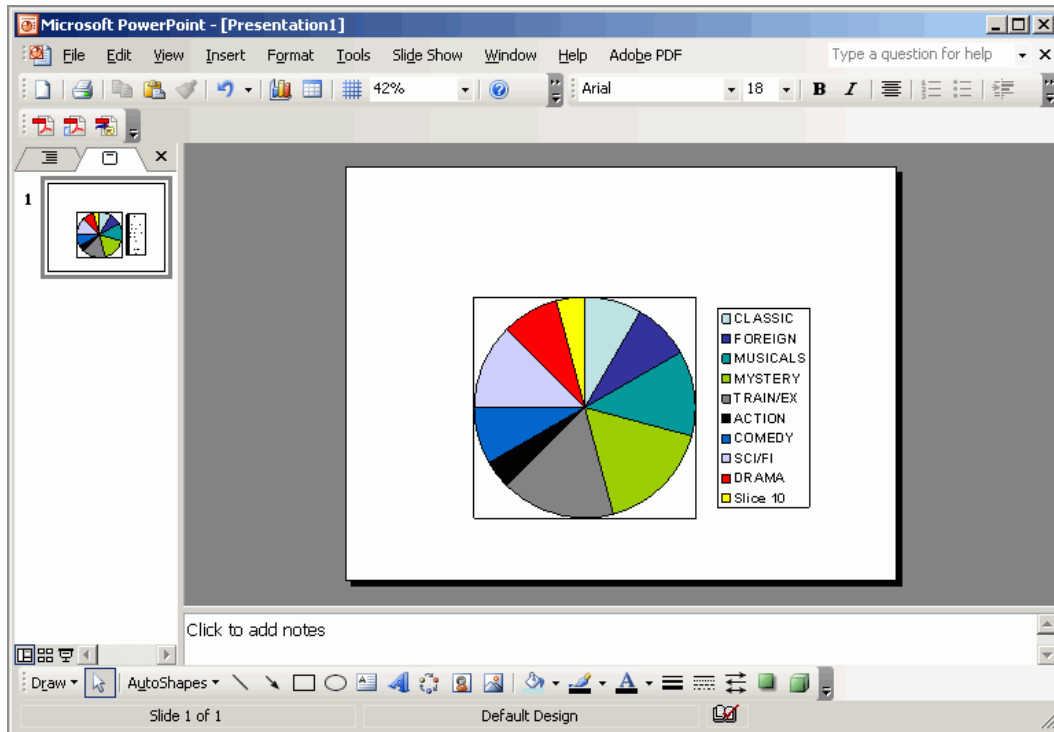The following image is an example of a chart exported to Excel.

The following image is an example of a chart exported to Word.

The following image is an example of a chart exported to PowerPoint.

E-mail In-Document Analytics Reports

You must use Internet Explorer as the default browser to successfully e-mail In-Document Analytics reports.

The Mozilla Firefox browser and the Safari browser do not support the Send as E-mail feature of HTML In-Document Analytics reports.

Using Safari as the Web browser has identical functionality to Mozilla Firefox. A limitation for both Safari and Mozilla Firefox is the unavailability of Send as E-mail functions in the HTML In-Document Analytics report. Send as E-mail functions in HTML In-Document Analytics reports require ActiveX controls, which are supported only when you use Internet Explorer as the Web browser.

Procedure

1. Click the arrow in the heading of a column and select **Send as E-mail** from the menu.

   The Prompt dialog box opens.
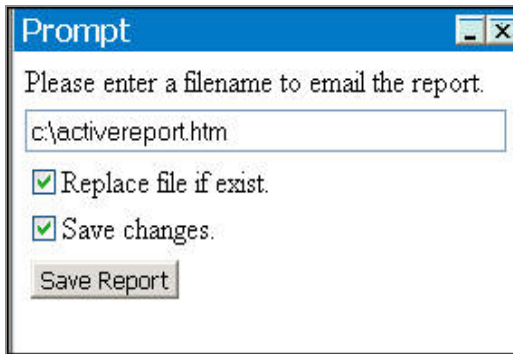
2. If a filter is applied to the In-Document Analytics report, Filtered Only appears as an additional option in the Prompt dialog box.

   Click **Filtered Only** to send only the filtered result instead of the entire report.

3. Enter a file name and location (or keep the default) and click **Save Report** to save the In-Document Analytics report as a HTML document.

   If Microsoft Outlook® is your default e-mail system, an e-mail is opened with the AHTML report as an attachment.
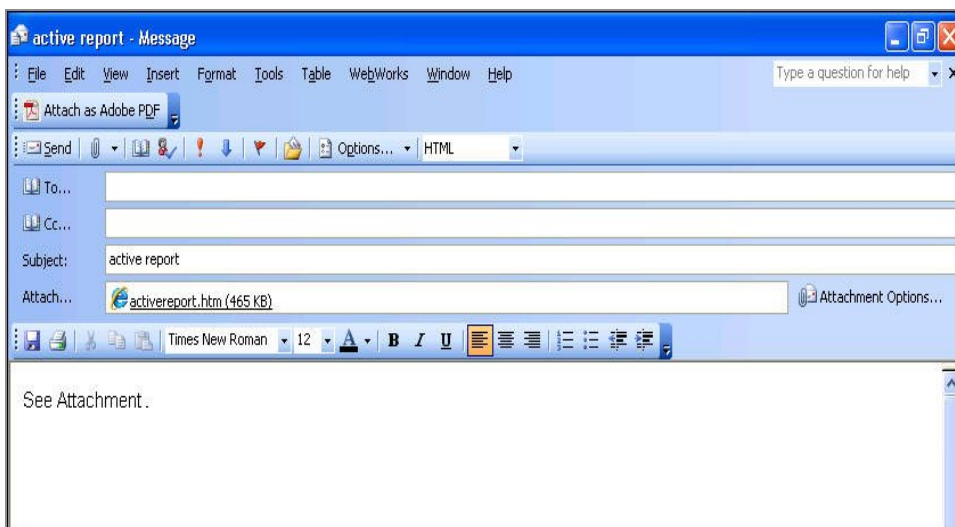
   If Microsoft Outlook is not your default e-mail system, save the In-Document Analytics report as an HTML document and attach the file to your e-mail message.

> **Note:** When using Internet Explorer 7 and Microsoft Office Outlook 2003 or 2007 on Windows, you may receive the error message **Access is denied** if you click the attached HTML file to preview the In-Document Analytics report before you send it. Once the e-mail is sent, the HTML file will open and the In-Document Analytics report will be displayed correctly on the machine of the e-mail recipient.

Generating Images for In-Document Analytics Reports

You may generate images for In-Document Analytics reports in connect or disconnect mode by placing images in the apps directory. If images are in the WebFOCUS Reporting Server application directory and no URL is specified, the JPEG image converts to a JavaScript image at run time.

All resizing of images should be done outside of and the image size should not be larger than 200x200 pixels. Embedding images does not support sizing or positioning of the image and it uses the current size and default position for that object. Larger images increase the time required for conversion and the loading of the report in the browser.

There are multiple ways to generate images for In-Document Analytics reports. You may do one of the following but not both.

Place Images in the WebFOCUS Reporting Server Application Directory for In-Document Analytics Reports

To place an image in the WebFOCUS Reporting Server application directory:

Procedure

1. From the Images tab of the Report Options dialog box, click the **Browse** button.

In disconnected mode, images for AHTML reports must be JPEG images.

2. Select **Developer Studio Desktop** from the **Look in** drop-down list.

3. Double-click **Projects on localhost**, **WebFOCUS Environments**, or **Windows Desktop**, and navigate to the image.

4. Select the image and click **Open**.

5. From the Location drop-down list, click **Page Header** or **Page Footer** to indicate the placement of the image in the report.

6. Click **Add**.

    The image is added to the image list.

7. Click **OK** to apply and save your selection.

Result

The image is added to your apps directory and inserted into your report at the selected location.

Specify the Image Path for In-Document Analytics Reports

To specify a full or relatively qualified URL:

Procedure

1. Type a full or relatively qualified URL path in the Image Source input field.

    If no URL is specified, the JPEG image converts to a JavaScript image at run time.

2. From the Location drop-down list, click **Page Header** or **Page Footer** to indicate the placement of the image in the report.

3. Select the **Include as Reference** check box.

4. Click **Add** to add the image to the image list.

5. Click **OK** to apply and save your selection.

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For information about this product, you can read the documentation, contact Support, and join Community.

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