This selection of the book will discuss the basics of SAP BusinessObjects Web Intelligence. Here you will find information on Web Intelligence features, guidelines on how to adjust preferences, discussions on reporting and analysis environments, and much more. Through detailed instructions and screenshots, explore what's ahead as you delve ever deeper into the WebI world.

“Introduction to SAP BusinessObjects Web Intelligence 4.1”

Contents

Index

The Authors

Jim Brogden, Heather Sinkwitz, Dallas Marks, Gabriel Orthous

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The release of the SAP BusinessObjects BI 4.0 platform brought with it countless improvements to the enterprise suite and a complete overhaul to SAP BusinessObjects Web Intelligence. Continuing with the momentum gained from the 4.0 release, SAP BusinessObjects BI 4.1 further strengthens the SAP BusinessObjects product line with many useful enhancements.

1 Introduction to SAP BusinessObjects Web Intelligence 4.1

The industry’s most powerful business intelligence ad hoc query and analysis reporting tool received a major facelift with version 4.0 and built on that new foundation with SAP BusinessObjects BI 4.1. The completely redesigned user interface gives business users the ability to create even more persuasive and engaging analysis documents than before. SAP BusinessObjects Web Intelligence 4.1 (which we’ll refer to as Web Intelligence) now comes with a powerful charting engine for a much-improved presentation of data, metrics, and analytics. These new visual attributes provide users with the capability to create powerful dashboard/report hybrids known as dashports.

Web Intelligence 4.1 delivers an ideal self-service reporting experience with the capability to query SAP InfoCubes using SAP Business Explorer (SAP BEx) queries, use SAP BusinessObjects Analysis workspaces for multidimensional reports, access traditional relational databases through SAP BusinessObjects universes, and connect to SAP’s revolutionary high-performance analytical appliance SAP HANA.

Web Intelligence provides business users with the tools to make better decisions and offer deeper insight into company data. The major benefits include the ability to drill, pivot, chart, track changes, publish, schedule, and share business information online and within a single online portal. The combination of an enhanced Report Panel, seamless connectivity to an extensive list of data sources, and the capability to contain vast amounts of data makes Web Intelligence the premier tool of choice for analyzing data.
This chapter introduces you to the key features and core functionality of the Web Intelligence reporting tool. We’ll also discuss the steps for setting up the report viewing properties, introduce the reporting analysis environments, and describe the basics of viewing and saving reports.

1.1 Features of Web Intelligence

Web Intelligence has been known for many years by report developers as “WebI” (pronounced “webby”). It’s best known as a highly intuitive, web-based query and analysis tool that provides business users with the capability to create and modify queries without having to write a single line of SQL.

Because Web Intelligence reduces the complexity of report building, business users have unprecedented opportunities to analyze and leverage company information. Self-service business intelligence has become a reality in Web Intelligence 4.1, which boasts an enhanced Report Panel designed for more intuitive report development, and data interaction. Reporting documents are published and shared through the BI Launch Pad portal, a convenient and efficient way of distributing reports to users across the enterprise.

The architecture of SAP BusinessObjects BI 4.1 lets Web Intelligence reports operate purely within a web browser. This delivery style significantly reduces deployment costs, making it easier for companies of all sizes to use the SAP BusinessObjects reporting suite. Web Intelligence plays a very important role in extending analysis across the enterprise and to a large audience of casual users, power users, and executives. This means that report viewers of every skill level can easily leverage Web Intelligence to interact with and analyze data on a frequent basis to solve business problems.

Key Strengths of Web Intelligence 4.1

- Improved charting engine for a standardized data visualization experience across SAP BusinessObjects BI 4.x reporting tools
- Ribbon-style controls for comfortable and intuitive interaction
- Ability to build multidimensional queries and analyze hierarchical data sets sourced from SAP BEx queries, SAP BusinessObjects Analysis workspaces, and Online Analytical Processing (OLAP) universes
- New chart types, including tag cloud chart, polar bubble and scatter charts, pie with variable slice depth, box plot chart, tree map chart, and heat map
- Ability to generate SQL without knowledge of underlying data structures
- Ability to develop and analyze reports in a zero-client online portal structure
- Self-service access to company data for business users
- Ability to merge dimensions of multiple data providers for more robust reports
- Drill-down functionality in reports
- Extensive set of out-of-the-box report section functions
- Ease-of-use in creating analytical documents with a variety of chart types
- Integration with Microsoft Office via SAP BusinessObjects Live Office
- Easy access to SAP InfoCubes through SAP BEx queries
- Use of web services, text files, and Microsoft Excel spreadsheets as data sources
- Capability to copy queries, variables, tables, and charts from one document to another
- Enhanced reporting styles and new charting features
- Ability to add hyperlinks and element links to report objects

In the following sections, we’ll discuss the core product functionality of Web Intelligence, including its six primary functions (query, report, analyze, share, customize, and integrate).

1.1.1 Core Product Functionality

The primary function of Web Intelligence 4.1 is two-fold: to provide the capability to query a set of data without any knowledge of the SQL language, and to interactively analyze data to further restrict, expand, and modify the way information is displayed and delivered. After data is retrieved, formatting can be easily applied to present results in a variety of customized formats.

The data retrieved with Web Intelligence 4.1 is displayed in the report section by using report element templates. The available templates include data tables, charts, and freehand cells designed to meet a wide variety of reporting requirements. After your query has been refreshed, and the results are returned, you can easily visualize the data by inserting report elements and result objects into your reports.

You can quickly organize reports by inserting breaks to group the data and by applying block-level or report-level filters with just a few clicks of the mouse.
Notice the extensive set of shortcut icons that assist with frequently used customizations. These icons are located at the top of the screen in the Web Intelligence design mode and are grouped into three toolbars.

When you're ready to share your work, you can easily publish your documents to the BI Launch Pad. Users across the enterprise will then have the opportunity to view and interact with your reports by logging on to the BI Launch Pad through a web browser without any installation requirements.

Extended interaction is available to users by right-clicking on a report or report element for on-the-fly modification and customization in design mode.

Let's consider the primary Web Intelligence functions:

- **Query**
  Building queries in Web Intelligence 4.1 is much easier than in previous versions of this software. In Web Intelligence 4.1, you have the capability to connect to an SAP BEx query as a data source, connect to an Analysis View as a data source, or include multiple universes within the same document. In addition, you can quickly and graphically generate complex SQL statements within the Web Intelligence Query Panel that contain subqueries and unions (referred to as combined queries).

  Now in 4.1 Service Pack 3 (SP3), Excel spreadsheets can be used as a data source for Web Intelligence in both the BI Launch Pad and in Web Intelligence Rich Client.

- **Report**
  Over the course of this book, you'll learn to create everything from simple reports to complex analysis documents with multiple report tabs. You can unlock the full potential of Web Intelligence 4.1 by using the built-in editing and formatting features available for presenting data quickly and accurately. Reporting with Web Intelligence is also very flexible and intuitive. Never again will your reporting solution cause the bottleneck in your BI solution.

- **Analyze**
  You'll learn how to use drill filters, report filters, block filters, and built-in report functions to provide detailed, laser-targeted analyses. You'll discover the extensive list of report functions and contexts available for creating precise variables and formulas.

Web Intelligence 4.1 enables you to provide deep analysis, deliver valuable analytical reports to the user community, and become a more insightful analyst and subject matter expert (SME) with your clients' data. You can perform on-the-fly modifications to reports with an extensive set of options available when you right-click on a report in design mode.

- **Share**
  You'll be able to publish your Web Intelligence report documents to the BI Launch Pad portal for collaborative analysis. The documents can then be scheduled to execute the generated SQL statements and distribute the reports to enterprise user inboxes or through external email.

  BI Launch Pad delivers Web Intelligence reports within the default folder structure or within a folder-like structure known as categories. Reporting documents can also be delivered in the BI workspace (previously known as Dashboard Builder).

  You can distribute reports to the mobile devices of your workforce with SAP BusinessObjects Mobile. Mobile integration is a powerful feature of SAP BusinessObjects BI 4.1.

- **Customize**
  Have you ever wanted to create professional Web Intelligence report dashboards that are customized to fit the color and style of your client? Build fresh, innovative, interactive, and data-rich documents that meet any organization’s style requirements while also delivering powerful BI.

- **Integrate**
  You'll discover the capabilities of integrating a variety of data sources such as SAP BW with Web Intelligence 4.1. For dashboard integration, you can generate web services for use as consumable data sources by other SAP products, such as SAP BusinessObjects Dashboards.

These six areas describe the capabilities of Web Intelligence and are the focus of this book.

1.1.2 Web Intelligence Offline

Operating remotely gives users greater flexibility and the freedom to work offline and outside the BI Launch Pad. Offline mode, also known as standalone mode, is possible with the client tool called Web Intelligence Rich Client.
This portable version of Web Intelligence provides report developers with the capability to disconnect from the Central Management Server (CMS) and work outside the BI Launch Pad. Web Intelligence Rich Client also lets you use a local data source; for example, you can import an Excel spreadsheet or text file as a local data source to create Web Intelligence documents.

Figure 1.1 shows the initial screen you see when you launch Web Intelligence Rich Client 4.1. Your options are split into two categories: New Document and Open Document.

In the New Document box, you can choose from creating a report sourced from Universe, Excel, BEx, Analysis View, Text, or Web Services. The Open Document box allows you to quickly reopen recent documents.

Web Intelligence Rich Client is one of nine client tools available in SAP BusinessObjects BI 4.1 that can be installed on a user’s computer. See Chapter 21 for a closer look at the Web Intelligence Rich Client tool.

1.1.3 SAP BusinessObjects BI 4.1 Client Tools

Figure 1.2 shows the full list of SAP BusinessObjects BI 4.1 client tools. The highlighted tool, Web Intelligence Rich Client, can be launched to connect to the SAP BusinessObjects BI 4.1 system or can be used in standalone mode.

Other valuable SAP BusinessObjects BI 4.1 client tools include the Information Design Tool, Query as a Web Service Designer, Report Conversion Tool, Translation Management Tool, Universe Design Tool, and Widgets.

Figure 1.2 SAP BusinessObjects BI 4.1 Client Tools

If Web Intelligence Rich Client doesn’t already exist on your computer, you can install it by going to the View or Modify section located in the Web Intelligence settings on the Preferences page. Click INSTALLATION REQUIRED, which is located to the right of the desktop selection to begin the installation.

Each client tool is mutually exclusive, and the tools provide completely different functionalities. Most business users will need only the tools used for accessing data, such as Web Intelligence Rich Client and Query as a Web Service Designer.

1.1.4 Web Intelligence and the Microcube

After a query has been refreshed in Web Intelligence, the data is stored in memory in an unseen microcube. A microcube is a data storage structure existing
within each report to store the query results behind the scenes. Users can present any combination of the data with any type of data block or chart type while also providing the ability to drill down and apply report-level or block-level filters.

By storing the result data of each document for the last query that was successfully executed, the microcube allows you to analyze data using different dimensions in separate report tabs and report blocks while revealing only the data that you request. Until the data becomes visible in a report, it remains stored behind the scenes in the microcube. The style, format, and presentation of the data remain the decision of report designers to most effectively display data to solve business problems.

1.2 Reading Web Intelligence Reports

The BI Launch Pad is the centralized web portal designed to provide access to all of your BI content, securely and within a single platform. The BI Launch Pad lets you create, modify, save, share, and analyze valuable company data from a single location and within a browser.

SAP BusinessObjects BI 4.1 will help you enable business users to make better informed decisions. The built-in structures of Web Intelligence work seamlessly within the BI Launch Pad, providing the capability to analyze data with ease.

Web Intelligence allows users to conveniently create and modify reports through an Internet browser or by working locally with Web Intelligence Rich Client with standalone and disconnected capabilities.

Working in offline mode allows report developers to disconnect from the CMS and work locally with saved Web Intelligence documents rather than through a browser. This functionality facilitates the frequently requested task of saving and editing Web Intelligence documents outside of the BI Launch Pad portal.

**Note**

Web Intelligence 4.1 refers to viewing reports as reading and to editing or modifying reports as designing. We’ll describe these slight changes in the latest version in more detail in later chapters.

Figure 1.3 shows a custom-formatted Web Intelligence report with Element Link filters being read in a browser within the BI Launch Pad.

**Figure 1.3** Web Intelligence 4.1 Report in the BI Launch Pad

Most report consumers will need only to read or view reports; designing reports is generally left to power users and report developers. While reading reports, users will have the opportunity to drill, filter, and export results to PDF or Excel files.

1.3 Adjusting Web Intelligence Preferences

A number of configurable settings are available to enhance the user experience when reading and interacting with Web Intelligence reports in the BI Launch Pad.
To adjust settings for reading and designing reporting documents, begin by clicking on the Preferences link located in the upper-right corner of the BI Launch Pad (see Figure 1.4).

![Figure 1.4 Preferences Link in the BI Launch Pad](image)

Depending on your security permissions, the Preferences page allows you to modify several general settings and the default settings for viewing/reading and modifying/designing reporting documents.

Figure 1.5 shows the Web Intelligence preferences that you can adjust locally in a web browser. In addition to these Web Intelligence preferences, you can adjust the following seven other preference groups with settings in the BI Launch Pad:

- **General**
- **Change Enterprise Password**
- **Locales and Time Zone**
- **Analysis edition for OLAP**
- **Web Intelligence**
- **BI workspaces**
- **Crystal Reports**

![Figure 1.5 Web Intelligence Preferences](image)

Adjusting Web Intelligence Preferences

Web Intelligence settings consist of the following:

- **View**
- **Modify**
- **Select a default Universe (optional)**
- **When viewing a document**
- **Drill options**
- **Start drill session**
- **Select a priority for saving to MS Excel**

Let’s explore these settings further.
1.3.1 Setting the View and Modify Selection Types

Depending on whether you’re a casual user who needs only to read and print reports or a report designer who requires access to the Query Panel, the selections made to view and modify reports play an important role in the features that will be available to you.

Let’s examine the selection types available for both View and Modify:

- **HTML (No download required)**
  The HTML setting provides a fully functional HTML panel that allows users to read and design reporting documents with all of the features in the Report Panel. The biggest advantage of using the web setting to read and design documents is the ability to link to a document. This feature is covered in detail in Chapter 15. Extensive improvements have been made with this viewer, and it now contains 99% of the functionality in the Applet (Java) viewer.

- **Applet (Download required)**
  The Applet setting is the selection used for creating queries with Web Intelligence in the BI Launch Pad and advanced interactive reports by using the Java plug-in. This setting was once used almost exclusively by power users and advanced report consumers, but now in SAP BusinessObjects BI 4.1, the HTML viewer has become the preferred viewer type by many report developers. The disadvantage to this setting is that linking to another document isn’t available, and the full OpenDocument syntax is required to link to another published report, document, or dashboard.

- **Desktop (Rich Client, Windows only, installation required)**
  This selection is used to automatically launch Web Intelligence Rich Client when reports are viewed or modified.

- **PDF**
  The PDF option is unique to the View preference list and has very little interactive functionality. The primary feature of this viewing format is to open the Web Intelligence report in a PDF for easy distribution. After the document opens, you can print or save the PDF report. PDF reports can be easily shared with users across the enterprise, emailed, posted to an FTP site, or published to the SAP BusinessObjects BI 4.1 platform.

There is one setting that is unique to the Modify list and that’s the ability to browse for a default universe. This feature is available so a specific universe can be assigned as the default universe for when new reports are created.

The next set of properties describes how to set the viewing locale and time zone for reports and the BI Launch Pad. This feature is an important descriptive value, showing accurate times for when reports were last saved and refreshed.

1.3.2 Locale When Viewing a Document

When viewing a Web Intelligence document, the data can be formatted by either the document locale or preferred viewing locale. To set the preferred viewing locale to be different from the default browser locale, follow these steps:

1. Click the **Use my preferred viewing locale to format the data** option under the Web Intelligence preferences.
2. Select the **Locales and Time Zone** preferences section, which is shown in Figure 1.6.
3. Change the **Product Locale** setting to either **Use browser locale** or **English**.
4. Choose the **Preferred Viewing Locale** from more than 130 locale options.
5. Select a **Current Time Zone** or use the selection **Local to web server**.

![Figure 1.6 Locales and Time Zone Preferences](image)

1.3.3 Drill Option Preferences

In addition to providing drill filters in drill mode, many data tables and charts let you drill down with a single click. This type of drilling is available when drill...
mode is activated, and the dimension objects have been added to a hierarchy in the universe.

As shown in Figure 1.7, three settings are available for selection under **Drill Options** when setting **Web Intelligence** preferences:

- **Prompt when drill requires additional data**
- **Synchronize drill on report blocks**
- **Hide Drill toolbar on startup**

Any combination of these settings can be selected. We recommend that you select **Prompt when drill requires additional data** and **Synchronize drill on report blocks**. You can also show or hide the drill toolbar when opening a report.

You also have the choice of defining where a drill session starts: **On duplicate report** or **On existing report**. The default selection is **On existing report**.

1.3.4 **Saving to Microsoft Excel Priority**

The final setting in Web Intelligence preferences is to assign the priority for saving reports to Excel: either the formatting of the documents or easy data processing in Excel (the default setting).

**Note**

Be sure to click the **Save** button or the **Save & Close** button in the lower-right corner of the **Preferences** window to complete your changes. Refresh your browser to ensure that all preference changes are enabled and integrated into your session.

Adjusting the Web Intelligence preferences based on your needs ensures that you optimize the features for viewing, modifying, and creating reports. Let’s explore the reporting and analysis environments next.

1.4 **The HTML Viewer versus the Applet (Java) Viewer**

As Web Intelligence continues to evolve, the two viewer types available to users become more and more similar. It wasn’t long ago that the HTML viewer, previously known as the Web viewer, had minimal functionality, and the Applet (Java) viewer was reserved for power users. But thanks to the efforts of the Web Intelligence product development team, users now have two full-featured viewer types to choose from.

The Applet viewer, previously known as the Rich Internet Application (RIA) viewer, requires the installation of the Java Runtime Environment plug-in and maintains a functional advantage over the HTML viewer, but by the slimmest of margins. Originally touted as the viewer of choice for advanced report designers, its fraternal twin, the HTML viewer, now has 99% of the same functionality and an almost indiscernible appearance.

Because the HTML viewer doesn’t rely on a third-party plug-in, many users find it easier to maintain and faster at delivering reports than using the Applet viewer. This was the case with Web Intelligence in version 4.0 and 4.1, but not in 4.1 SP3. Your voices were heard, and the product development team has delivered an Applet viewer that now allows you to open reports much faster than previously in the 4.x releases.

In many ways, both viewers are now practically equal. However, because of the speed in opening a report and connecting related reports through Document Linking, the advantage goes to the HTML viewer, while the Applet viewer maintains a functional advantage over the HTML viewer by delivering conditional formatting and custom number formatting.

The next section will introduce you to the concept of zero-client versus thin-client report creation and delivery with Web Intelligence.

1.5 **Web Intelligence Reporting and Analysis Environments**

Web Intelligence reports are created by, and delivered to, business users in either a zero-client or thin-client method, with the primary method of delivery being zero-client. To begin working with Web Intelligence, reporting documents are
accessed either through a web browser after logging on to the BI Launch Pad, or by opening the locally installed Web Intelligence Rich Client tool.

### 1.5.1 Zero-Client Online Analysis

You don’t have to install SAP BusinessObjects BI 4.1 software to experience the benefits of Web Intelligence. With just a web browser, you can log on to the BI Launch Pad to view, create, edit, analyze, schedule, or interact with Web Intelligence reporting documents. All of the functions, tools, and data delivery elements are at your fingertips with just a few clicks and proper credentials to access the SAP BusinessObjects BI platform.

### 1.5.2 Thin-Client Development

Since the addition of the Web Intelligence Rich Client, analysis has been extended to power users who need to analyze data when disconnected from the CMS or SAP Enterprise Portal. When you are connected to the CMS, you can export or publish documents directly to the enterprise system for online analysis. Once published, reports created in Web Intelligence Rich Client are easily shared with other enterprise users through standard group security permissions.

The next section describes display modes for viewing reports.

### 1.6 Report Display Modes

Web Intelligence reports can be viewed in the BI Launch Pad with two different display modes: **Page** and **Quick Display** (see Figure 1.8). **Page** mode allows you to view the report the way it fits onto a printed page while also providing the capability of drilling into the data. **Quick Display** mode is used primarily for reports intended for analysis but not for printing.

Each mode displays data differently, and you can easily toggle back and forth between modes as necessary by following these steps:

1. Enter design mode by clicking on **Design** in the upper-right corner.
2. Select the **Page Setup** tab from the primary **Report Panel** tab set.
3. Select the **Display** tab from the third group of subordinate tabs.

### 1.6.1 Saving in the Applet Viewer

To save the report outside of the enterprise platform (in the Applet viewer), follow these steps:

1. Select **Save As** (see Figure 1.9) after clicking on the **Save** icon, and then select either **Desktop**, **Documents**, or **Computer** as the export location.
2. When exporting the data outside the enterprise, choose one of the following file types: **XLS**, **XLSX**, or **PDF**.

By clicking on **Save**, you overwrite the existing version. Depending on your rights, you can update Web Intelligence documents that reside in the folder structure within the BI Launch Pad. When working in a production environment, the best workflow is to save documents to your **My Documents** area if you’d like to make changes to the query or one of the **Report** tabs.

### 1.6.2 Saving in the HTML Viewer

To save the report outside of the enterprise platform (in the HTML viewer) select the **Export** icon, and then select one of the following export types (see Figure 1.10):
Introduction to SAP BusinessObjects Web Intelligence 4.1

> Export Document As
> Export Current Report As
  > PDF
  > Excel 2007
  > Excel
  > CSV Archive
  > Text
> Export Data to CSV

Figure 1.10 Exporting a Document from the HTML Viewer

1.7 Summary

Web Intelligence provides an extensive set of mature features that combine complex query building with detailed analytical reporting capabilities. This best-in-class reporting tool introduced in 1997 has evolved to become the standard ad hoc analysis and reporting tool for many businesses around the world. With version 4.1, you can easily source reports from SAP BEx queries, Analysis Views, and patented semantic layer universes.

The core functionality of Web Intelligence contains an extensive list of valuable data analysis features. Report building becomes much easier for business users because they can develop complex queries visually without knowledge of the underlying SQL. The ability to query multiple data sources within the same document and link the results by merging dimensions is an extremely valuable analytical report development feature.

Web Intelligence reports can be easily viewed and analyzed by using only a web browser connected to the BI Launch Pad. Reporting documents can be shared with selected users across the enterprise and then scheduled to be refreshed and delivered to a user inbox or external email address.

You can take analysis offline with Web Intelligence Rich Client. Report developers can now save Web Intelligence documents locally and analyze data without being connected to the CMS. With all of the functional capabilities delivered within Web Intelligence 4.1, SAP has completely replaced its predecessor reporting tool, which was known in previous versions as Desktop Intelligence. In SAP BusinessObjects BI 4.1, Desktop Intelligence has been retired, and existing reports from a previous version need to be converted to Web Intelligence to be viewed in 4.1. See Appendix A for a checklist that describes the nine steps of report conversion.

The next chapter describes the new additions introduced to Web Intelligence in SAP BusinessObjects BI 4.1 up through SP3. SAP BusinessObjects BI 4.1 includes many new features to improve productivity and the user experience.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgments</td>
<td>21</td>
</tr>
<tr>
<td>Foreword</td>
<td>23</td>
</tr>
<tr>
<td><strong>1 Introduction to SAP BusinessObjects Web Intelligence 4.1</strong></td>
<td>25</td>
</tr>
<tr>
<td>1.1 Features of Web Intelligence</td>
<td>26</td>
</tr>
<tr>
<td>1.1.1 Core Product Functionality</td>
<td>27</td>
</tr>
<tr>
<td>1.1.2 Web Intelligence Offline</td>
<td>29</td>
</tr>
<tr>
<td>1.1.3 SAP BusinessObjects BI 4.1 Client Tools</td>
<td>31</td>
</tr>
<tr>
<td>1.1.4 Web Intelligence and the Microcube</td>
<td>31</td>
</tr>
<tr>
<td>1.2 Reading Web Intelligence Reports</td>
<td>32</td>
</tr>
<tr>
<td>1.3 Adjusting Web Intelligence Preferences</td>
<td>33</td>
</tr>
<tr>
<td>1.3.1 Setting the View and Modify Selection Types</td>
<td>36</td>
</tr>
<tr>
<td>1.3.2 Locale When Viewing a Document</td>
<td>37</td>
</tr>
<tr>
<td>1.3.3 Drill Option Preferences</td>
<td>37</td>
</tr>
<tr>
<td>1.3.4 Saving to Microsoft Excel Priority</td>
<td>38</td>
</tr>
<tr>
<td>1.4 The HTML Viewer versus the Applet (Java) Viewer</td>
<td>39</td>
</tr>
<tr>
<td>1.5 Web Intelligence Reporting and Analysis Environments</td>
<td>39</td>
</tr>
<tr>
<td>1.5.1 Zero-Client Online Analysis</td>
<td>40</td>
</tr>
<tr>
<td>1.5.2 Thin-Client Development</td>
<td>40</td>
</tr>
<tr>
<td>1.6 Report Display Modes</td>
<td>40</td>
</tr>
<tr>
<td>1.6.1 Saving in the Applet Viewer</td>
<td>41</td>
</tr>
<tr>
<td>1.6.2 Saving in the HTML Viewer</td>
<td>41</td>
</tr>
<tr>
<td>1.7 Summary</td>
<td>42</td>
</tr>
<tr>
<td><strong>2 What’s New in Web Intelligence 4.1?</strong></td>
<td>45</td>
</tr>
<tr>
<td>2.1 SAP HANA Variable Support in SAP BusinessObjects BI 4.1 SP3</td>
<td>46</td>
</tr>
<tr>
<td>2.1.1 Support of Query Stripping</td>
<td>46</td>
</tr>
<tr>
<td>2.1.2 Enabling Query Stripping</td>
<td>47</td>
</tr>
<tr>
<td>2.2 Freeze Header Rows and Left Columns</td>
<td>49</td>
</tr>
<tr>
<td>2.2.1 Freeze Rules</td>
<td>49</td>
</tr>
<tr>
<td>2.2.2 Enabling Freeze Settings</td>
<td>50</td>
</tr>
<tr>
<td>2.3 Custom Grouping</td>
<td>52</td>
</tr>
<tr>
<td>2.3.1 Steps for Creating Custom Groups</td>
<td>53</td>
</tr>
<tr>
<td>2.3.2 Custom Group Values in a Table</td>
<td>56</td>
</tr>
</tbody>
</table>
2.4 Merged Dimension Improvements ............................................... 57
  2.4.1 Adding an Object to an Existing Merge ........................................ 57
  2.4.2 Removing an Object from a Merged Dimension
      Instance ......................................................... 59
  2.4.3 Merging Objects with Hierarchies ............................................. 59
2.5 Usability Improvements ................................................................. 59
  2.5.1 New Input Control Features ...................................................... 60
  2.5.2 Improved Header and Footer Property Access .......................... 62
  2.5.3 Formula Editor Enhancements ................................................. 63
  2.5.4 Query Editing and Refreshing Updates ..................................... 65
2.6 Customizing Color Properties ......................................................... 67
  2.6.1 Custom Color Palettes ............................................................ 67
  2.6.2 Creating a New Custom Color Palette ................................... 69
  2.6.3 Formatting Data Series Colors ................................................. 71
  2.6.4 Defining Global Chart Palettes ............................................... 73
  2.6.5 Modifying Default Styles ....................................................... 74
2.7 Using Excel as a Data Source in the BI Launch Pad ......................... 74
  2.7.1 Creating Queries from Excel Files ......................................... 76
  2.7.2 Updating Published Excel Files .............................................. 78
  2.7.3 Refreshable Queries Based on Excel ..................................... 79
2.8 Charting Enhancements ................................................................. 80
  2.8.1 Format Data Series ............................................................... 80
  2.8.2 Series Color Options .............................................................. 80
  2.8.3 New Waterfall Chart Properties ............................................ 81
  2.8.4 Individual Line Widths in Line Chart ..................................... 83
2.9 Report Formatting Improvements ................................................... 84
2.10 Summary ..................................................................................... 85

3 Creating New Documents and Queries ........................................... 87
  3.1 Creating a Web Intelligence 4.1 Document .................................... 88
      3.1.1 Universe as a Data Source ................................................. 91
      3.1.2 Direct Connection to an SAP BEx Query ............................ 93
      3.1.3 Analysis Views as a Data Source ..................................... 97
  3.2 The Query Panel in Web Intelligence 4.1 ...................................... 100
      3.2.1 Universe Outline Pane ...................................................... 101
      3.2.2 Query Properties .............................................................. 102
  3.3 Adding and Editing Queries ........................................................ 104
      3.3.1 Evaluating Generated SQL Script ...................................... 104
4 Creating a Report in Web Intelligence 4.1 ........................................ 111
  4.1 Adding Data to Report Elements ................................................. 112
      4.1.1 Populating a Cross Table .................................................. 113
      4.1.2 Populating a Chart ........................................................... 114
  4.2 Sections and Breaks .................................................................. 115
      4.2.1 Setting a Section ............................................................... 116
      4.2.2 Grouping Data with Breaks .............................................. 118
  4.3 Outline Navigation .................................................................... 119
  4.4 Enhanced Sorting and Ranking ..................................................... 120
      4.4.1 Sorting ............................................................................ 121
      4.4.2 Ranking .......................................................................... 122
  4.5 Conditional Formatting ............................................................... 123
  4.6 Headers, Footers, and Background Images ..................................... 124
  4.7 Summary ..................................................................................... 125

5 The Web Intelligence 4.1 Report Panel ............................................ 133
  5.1 The Web Intelligence 4.1 Reporting Interface ............................... 134
  5.2 Reporting Toolbars ..................................................................... 135
  5.3 The Side Panel ............................................................................ 136
  5.4 Report Panel ............................................................................... 137
  5.5 Report Property Categories ........................................................... 138
      5.5.1 Report Elements ............................................................... 139
Contents

11 Scope of Analysis and Drill Functionality ......................................... 323
  11.1 Setting the Scope of Analysis in the Query Panel ......................... 324
  11.2 Drill-Down Setup in the Report Panel ........................................ 330
    11.2.1 Enabling Drill ............................................................ 330
    11.2.2 Drill Toolbar ............................................................. 331
    11.2.3 Drilling on Dimensions .............................................. 331
    11.2.4 Drilling on Measures ................................................ 336
    11.2.5 Drilling on Charts .................................................... 337
  11.3 Query Drill Option ............................................................. 340
  11.4 Taking a Snapshot .................................................................. 342
  11.5 User Settings for Drill Down .................................................. 342
    11.5.1 Prompt When Drill Requires Additional Data ...................... 343
    11.5.2 Synchronize Drill on Report Blocks ................................ 343
    11.5.3 Hide Drill Toolbar on Startup ...................................... 344
    11.5.4 Start Drill Session ..................................................... 344
  11.6 Summary ............................................................................. 344

12 Using Formulas and Variables ....................................................... 345
  12.1 Formulas and Variables ......................................................... 346
    12.1.1 Converting In-Place Objects into Formulas ....................... 346
    12.1.2 Exploring the Formula Editor ....................................... 348
    12.1.3 Creating Variables ..................................................... 350
  12.2 Reporting Functions and Operators ......................................... 352
    12.2.1 Aggregate Functions .................................................. 353
    12.2.2 Character Functions .................................................. 354
    12.2.3 Date and Time Functions .......................................... 356
    12.2.4 Document Functions ................................................ 357
    12.2.5 Data Provider Functions ............................................. 358
    12.2.6 Miscellaneous Functions ............................................ 359
    12.2.7 Logical Functions ..................................................... 361
    12.2.8 Numeric Functions .................................................... 362
    12.2.9 Set Functions .......................................................... 363
    12.2.10 Operators ............................................................... 364
  12.3 Formula Syntax ...................................................................... 368
    12.3.1 Primary Formula Syntax Rules ....................................... 368
    12.3.2 If – Then – Else Syntax .............................................. 368

13 Extending Query Panel Functionality ........................................... 379
  13.1 Complex Filtering Options .................................................... 380
    13.1.1 Filtering with Wild Cards .......................................... 380
    13.1.2 Nested Query Filters ............................................... 382
    13.1.3 Database Ranking ..................................................... 384
  13.2 Cascading and Optional Prompts ........................................... 387
    13.2.1 Defining a Cascading List of Values in the Universe Design Tool ........................................... 387
    13.2.2 Using a Cascading List of Values Object as a Prompted Filter in a Report ........................................... 389
    13.2.3 Refreshing a Report with a Prompted List of Values Object Filter ........................................... 390
    13.2.4 Optional Prompts ...................................................... 391
  13.3 Editing Auto-Generated SQL Scripts ....................................... 392
  13.4 Visually Tracking Data Changes in the Report Panel .................... 394
    13.4.1 Showing and Hiding Data Changes ................................ 395
    13.4.2 Data Tracking Options .............................................. 396
    13.4.3 Purging Data .......................................................... 397
    13.4.4 Identify and Modify Partial Results ............................... 398
  13.5 Data Preview ........................................................................ 400
    13.5.1 Filter Preview Data ................................................... 400
    13.5.2 Using Search to Filter Data Preview Values ...................... 401
  13.6 Additional Queries and New Data Providers ............................... 402
    13.6.1 Text Files as a Data Source ........................................ 403
    13.6.2 Web Services as a Data Source ................................... 404
    13.6.3 Microsoft Excel Files as a Data Source ......................... 405
  13.7 SAP HANA as a Data Source ................................................. 406
  13.8 Summary ............................................................................. 409
22.3 Setting Preferences ................................................................. 578
  22.3.1 Application Options ....................................................... 578
  22.3.2 Data Refresh Options ...................................................... 581
  22.3.3 Object Properties ........................................................... 582
  22.4 Summary ............................................................................. 584

23 Mobile Business Intelligence ...................................................... 585
  23.1 New Features in SAP BusinessObjects Mobile ...................... 585
  23.2 Designing Reports for Mobile Viewing ................................. 587
    23.2.1 Mobile Categories ........................................................ 589
    23.2.2 Mobile versus MobileDesigned ..................................... 591
  23.3 Mobile-Only Analytic Types .............................................. 600
    23.3.1 Query and Formula Design .......................................... 600
    23.3.2 Creating Sparklines ..................................................... 603
    23.3.3 Creating Bullet Graphs ............................................... 606
    23.3.4 Creating Micro Bar Charts .......................................... 607
    23.3.5 Creating Scorecards .................................................. 609
  23.4 Report Linking ....................................................................... 612
  23.5 Input Controls ........................................................................ 614
  23.6 Mobile Thumbnails .................................................................. 615
  23.7 Summary ............................................................................... 617

24 Universe Basics: The Information Design Tool ............................. 619
  24.1 Universe Basics ................................................................. 620
    24.1.1 Introducing the Information Design Tool ...................... 620
    24.1.2 Components of a Universe .......................................... 622
  24.2 Creating a New Universe Project .......................................... 624
  24.3 Creating Connections ............................................................. 625
  24.4 Creating Data Foundations .................................................... 627
    24.4.1 Inserting Tables into a Data Foundation ......................... 627
    24.4.2 Inserting Joins into the Data Foundation ....................... 628
    24.4.3 The Importance of Setting Cardinality ......................... 630
    24.4.4 Detecting Loops ......................................................... 631
    24.4.5 Detecting Aliases ........................................................ 631
    24.4.6 Detecting Contexts ..................................................... 633
  24.5 Creating Business Layers ....................................................... 636
  24.6 Creating Multisource Universes ............................................ 641

24.7 Universe Design Best Practices .............................................. 646
  24.7.1 Design with the Business User in Mind ............................. 646
  24.7.2 Design for Performance ................................................ 647
  24.7.3 Design for Maintainability ............................................. 648
  24.7.4 Design for Governance ................................................ 648

24.8 Converting an Existing Universe to a .UNX Universe .................. 648
  24.9 Summary ............................................................................... 654

Appendices ................................................................................. 655
  A Converting Desktop Intelligence Reports to Web Intelligence
    Documents .............................................................................. 657
    A.1 Report Conversion Tool (RCT) ........................................... 658
    A.2 Conversion to Web Intelligence ........................................ 658
      A.2.1 Analyze Existing Desktop Intelligence Report Usage ........ 659
      A.2.2 Identify Users with Desktop Intelligence Installed .......... 659
      A.2.3 Publish Locally Saved Desktop Intelligence Reports to
        the Repository ................................................................. 660
      A.2.4 Prioritize, Consolidate, and Eliminate ......................... 660
      A.2.5 Customize the Conversion Plan and Roadmap ............... 660
      A.2.6 Perform Report Conversion ........................................ 662
      A.2.7 Execute Post-Conversion Analysis and Validation .......... 663
      A.2.8 Manually Create Unconverted Reports ....................... 664
      A.2.9 Educate Users on Web Intelligence 4.1 ....................... 664
    A.3 Desktop Intelligence Compatibility Pack (DCP) ........................ 664
    A.4 Summary ........................................................................... 666
  B Third-Party Vendors and SAP Partners ....................................... 667
    B.1 Antivia ............................................................................. 668
    B.2 APOS Systems ................................................................. 668
    B.3 Centigon Solutions .......................................................... 669
    B.4 EV Technologies .............................................................. 670
    B.5 GB & Smith ...................................................................... 671
    B.6 InfoSol ............................................................................ 672
    B.7 LaunchWorks ................................................................. 672
    B.8 Summary ......................................................................... 673
  C The Authors .......................................................................... 675

Index ........................................................................................... 677
Index

3D look, 243, 248

A

Administrator, 541
Adobe Acrobat, 549
Alerting
conditional formatting, 151
formatting Rules Editor, 151
Aliases, 631, 647
best practices, 633
detect, 632
Align, 249
Analysis, 28
dimensions, 637
views, 90, 98, 409
views, data source, 97
workspaces, 97
workspaces, analysis views, 97
AND/OR operations, 123
Android, 586
Antivia, 667, 668
XWIS Advantage Express Edition, 668
XWIS Enterprise Platform, 668
Apache, 621
APOS
Administrator, 669
Enterprise Location Intelligence, 669
IDAC, 669
Insight, 669
Publisher, 669
Security Manager, 669
Storage Center, 669
Systems, 668
Apple iOS, 586
Applet viewer, 39, 90, 412
Java Runtime Environment, 39
saving, 41
Application Options, 574
Ascending or descending chart, 147
Assign data, 256, 260
ASUG, 664
Attribute view, 409
Auto-merge dimensions, 108
Available objects tab, 285

B

Background Image, 154
add, 154
color, 193
pattern, 155, 193
Bar charts
horizontal grouped, 218
vertical bar and line, 219
vertical grouped, 218
Bar display effects, 243, 250
BI Inbox, 523, 525, 550
BI Launch Pad, 32, 40, 74, 87, 132, 455, 501, 546
additional menu options, 473
application icons, 88
categories, 462, 468
details, 463
document Link, 462
documents tab, 458
documents toolbar, 460
export, 528
folders, 468
general preferences, 464
header panel, 456
header panel menus, 456
history, 462
home tab, 458
locales and time zone preferences, 466
modify, 462
modules, 479, 490
more actions menu, 462
navigation, 455
new menu, 461
objects, 471, 514
organizer menu, 461
organizing objects, 469
page navigation, 463
BI Launch Pad (Cont.)
preference options, 465
preferences, 464
refresh, 463
schedule, 462
scheduling, ... 228
properties, 240, 242, 248, 249
radar charts, 167, 235

Charts (Cont.)
scatter charts, 228
series color options, 80
stacking, 221, 222, 228, 263
surface charts, 225
table types, 213, 254
tag cloud charts, 234, 236
tree map charts, 235
types, 217, 233
view results, 136
waterfall chart, 81, 237
zones, 245
Classic desktop reporting tool, 657
Clear filter, 514
Client-server mode, 561
CMS
publish, 568
security, 560
Collaboration, 501, 537
Color palette, 264
custom, 67
custom color, 69
Color properties
customizing, 67
Column layout, 478
Combined query, 110
query union, 111
remove, 112
requirements, 111
Compound module, 485
Conditional formatting, 131, 150, 259
limits, 150
rules, 153
settings, 151
Conditional visibility, 317
Conditions, 118
AND/OR operations, 118
case statement, 118
to list segment, 118
segments, 118
Confidential, 589
Connected mode, 560
Connection
best practices, 625
local, 625
secured, 625

Connection (Cont.)
server, 560
Content linking, 496
Context, 103, 633
detect, 633
Conversion, 657, 660
checklist, 658
single-pass report conversion, 661, 662
staged report conversion, 661, 662
Copy, 519
applications, 520
Excel, 520
Web Intelligence documents, 521
Copying objects, 470
Create variable, 347
Creation/editing tool, 132
CSS, 289
file, 292
CSV, 528, 558
export, 529
save as, 566
Custom BI workspace, 493
Custom color enhancements, 264
Custom colors
CMYK, 270
HSV, 268
HSL, 268
RGB, 269
shadows, 268
Custom dialog box, 144
create, 53
documentation, 54
tables, 56
values, 56
Custom sort
dialog box, 144
remove, 144
temporary values, 143
Customize, 29
conversion plan, 658

Dashboards, 257
Dashports, 25, 249

C
Calculated members, 637
Calculation context, 331, 371
Calculation view, 409
Cancel, 348
Cardinality, 630
Casual user, 501
Categories
moving, 469
new, 469
organizing, 467
category axis, 242, 252
Centigon Solutions, 669
CMaps Analytics Extension for Web Intelligence, 669, 670
Central Management Console (CMC), 106, 541
Central Management Server, 30
center, 290
center default style, 290
centered, 507
centered data, 507
Charts, 135, 213, 247
area charts, 224
bar charts, 167, 231
box plot charts, 234
bubble charts, 228, 230
business reports, 227
column charts, 218, 222
column options, 215
components, 215
customizing, 239
donut charts, 226
donut charts 2D, 226
dual value axes, 220
enhancements, 80
features, 80
filter, 308
format, 240
format data series, 80
globally stacked chart, 263
heat map charts, 236
hierarchical charting, 256
horizontal bar charts, 232
line chart, 83
line charts, 167, 223
Multigroup charting, 147
pie charts, 167, 225
pie charts 2D, 226
pie charts 3D, 227
point charts, 228
polar bubble charts, 228
polar charts, 230
polar scatter chart, 228
properties, 240, 242, 248, 249
radar charts, 167, 235

D
Dashboards, 257
Dashports, 25, 249
Filter (Cont.)
predefined filters, 118
quick filter, 121
remove objects, 301
report panel, 304
simple, 304
types, 295
user-defined, 299
Filter Instances by Type option, 536
Filtering, 60
dimensional filtering, 60
Folders
moving, 469
new, 469
organizing, 467
Footer, 154
add, 154
property access, 62
Format Number, 260
Formatting
changed data, 505
data series colors, 71
data series options, 72
functional sections, 292
measure, 260
report, 84
report properties, 273
sections, 138
tips, 259
toolbar, 162
Formula, 189
bar, 178
context formula, 373
create, 346
definition, 346
definition, 346
definition, 346
derector functions, 349
syntax, 368
text cell, 166
toolbar, 345
values added, 65
variables, 345
Freeform layout, 478
Freeze
columns, 202
Freeze (Cont.)
enabling freeze, 202
header rows, 49, 202
headers, 201
icon, 50
left columns, 49
rules, 49
settings, 50
FTP
location, 526
Full outer join, 628
Functions, 348
aggregate, 349, 353
categories, 352
category, 349, 354
data provider, 350, 358
date and time, 349, 356
document, 350, 357
logical, 350, 361
miscellaneous, 350, 359
numeric, 350, 362
set, 363
G
GB & Smith, 671
360Cast, 671
360Eyes, 671
360Plus, 671
360View, 671
Integrity, 671
General settings, 34
Generic, 621
Global chart palettes, 73
Global configurable options, 249
Global property category, 241
Go To Object, 573
Grid and background, 243
Group List, 524
Grouping, 196
custom, 197
custom group, 52
custom values, 200
data, 139
options, 198
H
Header, 154
add, 154
format, 62
panel, 456
property access, 62
Help, 574
Hide, 257
Hide Changes/Show Changes button, 509
Hierarchichal navigation, 318
charts, 320
data, 57, 116, 319
Hierarchies, 325, 637
Horizontal table
layout properties, 195
HSQDB, 621
HTML, 446
HTML viewer, 39
linking to documents, 426
saving, 41
Hyperlink, 425, 433, 501, 502, 526
adding, 426, 427
complete URL Path, 430
document format, 432
document, 432
document instance, 430
document instance, 430
document location, 430
document properties, 432
refresh on open, 430
target area within the document, 431
IBM, 621
iDocID, 443
If-Then-Else syntax, 368
Import style, 290
InfoArea, 96
Information Design Tool, 407, 617, 619, 620, 622, 631
Information views, 409
InfoSol, 672
360Eyes, 672
360Plus, 672
InfoSol (Cont.)
360Site, 672
360View, 672
InfoBurst Enterprise, 672
Inner join, 628
Input control, 259, 278, 614
add, 313
assign dependency, 313
delete or remove, 316
interacting, 315
map view, 279
new features, 60
properties, 311
reset, 278
type, 280, 311
Input parameters, 444
Instance title, 530
Integrate, 29
Interactive Analysis, 573
Intersection, 111, 112
J
Java, 439
Join settings, 630
between condition, 630
cardinality, 630
complex join condition, 630
detect cardinality, 630
set outer joins, 630
setting join conditions, 630
shortcut join, 630
L
LaunchWorks, 672, 673
Activity Launch, 673
Dashboard Launch, 673
LaunchPortal for SAP BusinessObjects, 673
LaunchPages, 673
LaunchPortal for SAP BusinessObjects, 673
Report Launch, 673
Left join, 628
Legend category options, 252
Legend property category, 242
Light and shadow effects, 243, 248, 250
Light power, 250
<table>
<thead>
<tr>
<th>Tables (Cont.)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>border property</td>
<td>193</td>
</tr>
<tr>
<td>converting</td>
<td>207</td>
</tr>
<tr>
<td>cross table</td>
<td>133, 166, 204, 205</td>
</tr>
<tr>
<td>data table</td>
<td>208</td>
</tr>
<tr>
<td>displaying data</td>
<td>187</td>
</tr>
<tr>
<td>drag and drop objects</td>
<td>134</td>
</tr>
<tr>
<td>form</td>
<td>166</td>
</tr>
<tr>
<td>form table</td>
<td>204, 206</td>
</tr>
<tr>
<td>general property</td>
<td>192</td>
</tr>
<tr>
<td>horizontal table</td>
<td>166, 204</td>
</tr>
<tr>
<td>layout</td>
<td>167</td>
</tr>
<tr>
<td>layout property</td>
<td>195</td>
</tr>
<tr>
<td>properties</td>
<td>192</td>
</tr>
<tr>
<td>types</td>
<td>187, 204</td>
</tr>
<tr>
<td>using</td>
<td>189</td>
</tr>
<tr>
<td>vertical table</td>
<td>136, 166, 192, 204</td>
</tr>
<tr>
<td>Target window</td>
<td>433</td>
</tr>
<tr>
<td>Templates</td>
<td>441</td>
</tr>
<tr>
<td>property</td>
<td>441</td>
</tr>
<tr>
<td>Text formats</td>
<td>ASC, 421</td>
</tr>
<tr>
<td>layout</td>
<td>478</td>
</tr>
<tr>
<td>Text formats</td>
<td>485</td>
</tr>
<tr>
<td>Theta join</td>
<td>628</td>
</tr>
<tr>
<td>Thin-client</td>
<td>39</td>
</tr>
<tr>
<td>development</td>
<td>40</td>
</tr>
<tr>
<td>Third-party vendors</td>
<td>667</td>
</tr>
<tr>
<td>Thumbnail</td>
<td>615</td>
</tr>
<tr>
<td>Time zone</td>
<td>466</td>
</tr>
<tr>
<td>Title category options</td>
<td>251</td>
</tr>
<tr>
<td>Title property category</td>
<td>242</td>
</tr>
<tr>
<td>Toolbars</td>
<td>476</td>
</tr>
<tr>
<td>Tooltips</td>
<td>433, 441</td>
</tr>
<tr>
<td>Translation Management Tool</td>
<td>621, 647</td>
</tr>
<tr>
<td>Turn Into</td>
<td>207</td>
</tr>
<tr>
<td>Turn To</td>
<td>208, 239, 257</td>
</tr>
</tbody>
</table>

| Universe (Cont.)            |                                                                                   |
| components                  | 622                                                                               |
| connection (.CNX) file      | 622                                                                               |
| connection shortcut (.CNS) file | 622                                                                                           |
| data foundation (.DLX) file | 622                                                                               |
| data source                 | 91                                                                                |
| design best practices       | 646                                                                               |
| new project                 | 624                                                                               |
| objects                     | 91                                                                                |
| outline pane                | 101                                                                               |
| outline section             | 100                                                                               |
| parameters                  | 399, 639                                                                          |
| Query                       | 573                                                                               |
| UNX universes               | 648                                                                               |
| Universe Design Tool        | 93, 387, 622, 646                                                                 |
| Universe file extension     | .UNV, 620                                                                         |
| .UNX, 621                   |                                                                                   |
| Unstacked                   | 263                                                                               |
| Upgrade Management Tool     | 621                                                                               |
| URL                         | 441                                                                               |
| Usability improvements      | 59                                                                                |
| User education              | 658, 664                                                                         |
| User List                   | 524                                                                               |

| Viewer Hyperlink placeholder| 525                                                                               |
| Viewing locale             | 466                                                                               |
| Visually tracking data     | 394                                                                               |
| Volume effects             | 243                                                                               |

| Web Intelligence           | 25, 547                                                                           |
| application                | 89                                                                                |
| capabilities               | 28                                                                                |
| export                     | 529                                                                               |
| features                   | 26                                                                                |
| functions                  | 28                                                                                |
| offline mode               | 29, 32                                                                           |
| preferences                | 33, 558                                                                          |
| report designer            | 542                                                                               |
| report parts               | 486                                                                               |
| settings                   | 35                                                                               |
| view modes                 | 41                                                                               |
| Web Intelligence 4.1       | 25, 28, 98, 657                                                                   |
| core functionality         | 27                                                                               |
| Query Panel                | 100                                                                               |
| strengths                  | 26                                                                               |
| Web Intelligence Rich Client| 29, 411, 541, 557                                                                 |
| access                     | 558                                                                               |
| connected mode             | 560                                                                               |
| data provider              | 562                                                                               |
| data sources               | 562                                                                               |
| differences                | 557                                                                               |

<table>
<thead>
<tr>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone formatting</td>
</tr>
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<th>Web Intelligence Rich Client (Cont.)</th>
</tr>
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<tbody>
<tr>
<td>document security</td>
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<td>import a universe</td>
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<td>install</td>
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<td>launch</td>
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<tr>
<td>offline mode</td>
</tr>
<tr>
<td>preferences</td>
</tr>
<tr>
<td>printing</td>
</tr>
<tr>
<td>query panel</td>
</tr>
<tr>
<td>reports</td>
</tr>
<tr>
<td>save</td>
</tr>
<tr>
<td>Send for all users</td>
</tr>
<tr>
<td>Web Intelligence viewer toolbar</td>
</tr>
<tr>
<td>Web service</td>
</tr>
<tr>
<td>Web Service Definition Language (WSDL)</td>
</tr>
<tr>
<td>Web Services Publisher tab</td>
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