

IBM DB2 Alphablox



# Release Overview

*Version 84*



IBM DB2 Alphablox



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*Version 84*

**Note:**

Before using this information and the product it supports, read the information in "Notices" on page 47.

**Second Edition (March 2006)**

This edition applies to version 8, release 4, of IBM DB2 Alphablox for Linux, UNIX and Windows (product number 5724-L14) and to all subsequent releases and modifications until otherwise indicated in new editions.

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# Contents

## Chapter 1. What's new in DB2 Alphablox

### 8.4 . . . . . 1

Support for multiple locales . . . . .	1
Newly supported platforms . . . . .	1
DB2 Alphablox Cube Server enhancements . . . . .	2
Export to Excel enhancements . . . . .	3
Export to PDF enhancements . . . . .	3
Charting API enhancements . . . . .	4
New FastForward template for relational reporting . . . . .	5
New Alphablox portlet with bookmark persistency . . . . .	5
Printer rendering format based on the Blox UI model . . . . .	5
Additional language support . . . . .	6

## Chapter 2. Upgrades and migration

### information . . . . . 7

## Chapter 3. Enhancement requests

### addressed . . . . . 11

## Chapter 4. Issues addressed . . . . . 13

Assembly Workbench and examples-related fixes . . . . .	13
Chart-related fixes . . . . .	13
Data-related fixes . . . . .	13
Grid-related fixes . . . . .	13
General DHTML client and UI components-related fixes . . . . .	14
Alphablox Cube Server-related fixes . . . . .	14
ReportBlox-related fixes . . . . .	14
Platform-related fixes . . . . .	15
Documentation-related fixes . . . . .	15

## Chapter 5. Known issues and

### workarounds . . . . . 17

Known installation issues on Tomcat . . . . .	17
Known documentation installation issues . . . . .	17
General installation issues . . . . .	17
Known platform issues . . . . .	18
User interface. . . . .	18
Charting . . . . .	18
CommentsBlox . . . . .	19
Data manager and data connection . . . . .	19
DHTML client . . . . .	19

FastForward . . . . .	20
DB2 Alphablox Cube Server. . . . .	20
Relational reporting . . . . .	21
PDF rendering . . . . .	21
Server-side programming. . . . .	22
Telnet console . . . . .	22
WebLogic . . . . .	22
WebSphere . . . . .	23
DB2 Alphablox in general . . . . .	23
Known data source issues and workarounds . . . . .	23
Known DB2 OLAP Server and Hyperion Essbase issues . . . . .	23
Known Microsoft Analysis Services issues . . . . .	24

## Chapter 6. Removed functionality and platform support . . . . . 27

Removed Blox methods . . . . .	27
Removed repository-related methods. . . . .	30
Removed methods in Blox UI Model . . . . .	30
Removed constant field values . . . . .	30

## Chapter 7. Deprecated APIs. . . . . 33

Deprecated APIs. . . . .	33
Deprecated fields . . . . .	35
Deprecated constructors . . . . .	35
Deprecated classes . . . . .	36
Deprecated interfaces . . . . .	36

## Chapter 8. Documentation . . . . . 37

PDF documents . . . . .	37
Installing to an existing Alphablox installation. . . . .	38
Installing as a standalone information center . . . . .	38
Configuring the links to information center and Javadoc documentation . . . . .	39

## Chapter 9. Accessibility . . . . . 43

Keyboard shortcuts and accelerators for Blox user interface . . . . .	44
Keyboard shortcuts for ReportBlox user interface. . . . .	45

## Notices . . . . . 47

Trademarks . . . . .	48
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## Chapter 1. What's new in DB2 Alphablox 8.4

IBM® DB2® Alphablox for Linux®, UNIX® and Windows® Version 8.4 adds a host of new functionality that makes broader deployment of your applications easier. The new functionality includes the support for multiple locales, Microsoft® SQL Server 2005 Analysis Services, vertical clustering for WebSphere® Application Server, a new FastForward template for relational data sources, and a new portlet that you can use in your portal application without any modification. This release also enhances several highly useful features that make DB2 Alphablox an even more powerful front-end tool for your analytical applications. These enhancements include better Excel and PDF export functionality and the creation of traffic lighting effects in charts. This release also continues to enhance the support for creating and managing relational cubes using the DB2 Alphablox Cube Server, with support for persisted calculated members, partial metadata caching, metadata enhancements, and more MDX functions for filtering and statistics.

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### Support for multiple locales

DB2 Alphablox V8.4 adds the support for multiple client locales. Regardless of the server's locale, the Blox user interface, the FastForward application framework, and the Query Builder tool are now displayed based on the browser's language setting. For languages that display from right to left, the Blox user interface will automatically display correctly and there is no longer the need to programmatically set the direction.

For applications with modified or custom Blox UI components, a set of custom JSP tags are available for you to import your resource bundles. This functionality allows you to internationalize your application to support multiple client locales. For details on designing applications to support multiple locales, see the topic on Designing for multiple locales.

**Note:**

- ReportBlox user interface does not support multiple locales.
- Query Builder and the FastForward do not support bi-directional languages.

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### Newly supported platforms

Newly supported platforms in this release include:

- Hyperion System 9
- Microsoft SQL Server 2005 Analysis Services
- Microsoft SQL Server 2005
- Vertical clustering for WebSphere Application Server

See the system requirements section in the *Installation Guide*.

**Restriction:** Microsoft SQL Server 2005 Analysis Services has a new feature that allows administrators to specify perspectives, which are viewable subsets of the hierarchies in a cube to simplify the view for end users. DB2 Alphablox does not completely support this new feature. DB2 Alphablox metadata APIs will support perspectives, but result set

APIs do not. The difference can be observed in the discrepancies between the Member Filter and the Data Layout panel. Member Filter is built by making metadata API calls, so it will display only the hierarchies contained in the specified perspective. The hierarchies displayed in the Data Layout panel and the results of the DataBlox.getQuery() method are built from result set API calls. Therefore, they ignore the perspective specified in the query and return all hierarchies defined for the underlying cube.

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## DB2 Alphablox Cube Server enhancements

The DB2 Alphablox Cube Server enables multidimensional analysis on top of relational data stored as a star schema or snowflake schema. You can create a multidimensional representation of your relational data or use the metadata from an existing cube definition in DB2 Cube Views™ through the DB2 Alphablox Cube Server administration page.

This release adds the following support and enhancements:

- Support for calculated member definitions in cube definitions
- Support for parent-child recursive hierarchies
- Support for level key. Level key expressions allow member uniqueness to be better enforced.
- All level and all member support. Dimensions are extended to specify if a dimension has an "All" level or not, and to optionally specify the all member name.
- Support for dimension type. Dimensions can now be marked as **Regular** or **Time**. This enhancement makes it possible to eliminate the previous limitations on the support for time series-related MDX functions.
- Support for level types. This release extends the levels in a cube definition to have one of the following types:
  - REGULAR
  - TIME
  - TIME\_YEARS
  - TIME\_HALF\_YEARS
  - TIME\_QUARTERS
  - TIME\_MONTHS
  - TIME\_WEEKS
  - TIME\_DAYS
  - TIME\_HOURS
  - TIME\_MINUTES
  - TIME\_SECONDS
  - TIME\_UNDEFINED
  - UNKNOWN
- Scalability enhancements. There is now a tuning parameter setting for member caching. You can use the member cache to reduce the memory requirements for cubes with large numbers of members.
- Additional MDX functions and operators:

Category	Functions or Operators
Filtering functions	Filter, IIF, IsEmpty



Category	Functions or Operators
Time series functions	YTD, QTD, MTD, WTD  Full support to existing functions: OpeningPeriod, ClosingPeriod, ParallelPeriod, LastPeriods, PeriodsToDate
Statistical functions	Variance: <ul style="list-style-type: none"> <li>• Variance: Var, Variance, VarP, VarianceP</li> <li>• Standard deviation: Stdev, Stddev, Stdevp, Stddevp</li> </ul>
Item operators and functions	Aggregate, CoalesceEmpty, NonEmptyCrossjoin, Ordinal, NameToSet, Rank, DataMember, AllMembers
Operators	Is, And, Or, Not, XOR, >, >=, <, <=, =, <>

For more information, see Supported MDX syntax in the *DB2 Alphablox Cube Server Administrator's Guide*.

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## Export to Excel enhancements

DB2 Alphablox now exports data to native Excel format through Excel templates and macros. When users click the **Export to Excel** button in the user interface, they can choose from the two provided templates, or they can choose not to use any template.

- The **Default** template exports data in the grid to Excel and then generates the chart based on the grid data. Because the chart is generated from the grid data:
  - Changes to the exported grid data will automatically update the chart.
  - The chart generated in Excel might not look the same as the one in DB2 Alphablox.
- The **Use Chart Data** template exports the chart's data onto a separate worksheet from the grid and then generates the chart. Because the chart is generated using the chart's data from DB2 Alphablox:
  - The chart is more similar to the one in DB2 Alphablox.
  - The grid data and the chart data are not linked. Changes to the exported grid data will not update the chart.
- The **No template** option simply sets the MIME type of the output to `application/vnd.ms-excel`. This MIME type triggers the browser to launch the Excel application to display the HTML page. This option does not involve the use of any Excel template or macros.

Application developers can create custom templates based on the properties DB2 Alphablox exports to the Excel worksheet. See the topic on Exporting data to Excel for more information.

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## Export to PDF enhancements

This release provides users with more control over the layout of the generated PDF report. Application developers now also have the ability to create PDF reports without a browser session.

### More user control over layout

When users click the **Export to PDF** button in the Blox user interface, a **Create PDF Report** dialog opens, allowing the users to specify the report layout. In

addition to the general settings on page orientation, page size, header text, and footer text, this release gives users the ability to:

- Fit data columns in a grid onto multiple pages
- Specify the height and the width for charts

For more information, see "Default user interface options for PDF reports".

## **Saving a PDF report without a browser session**

Previously you could not save a PDF report unless the JSP page is loaded into a browser. With the new `writePDFToFile()` method, you can now call the JSP page in your Java™ code to save a PDF report directly into a specified file name and location. See "Specifying PDF storage locations and file names" for more information.

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## **Charting API enhancements**

You can now create traffic lighting effects in charts by setting data series colors based on their values through the API. Several new objects and APIs are provided for controlling the chart's legend, identifying the data point in the chart that the user interacts with, and creating custom trendline algorithms. There is also a new chart type called the contribution chart.

### **Setting colors to data series**

You can now create traffic lighting effects in charts, calling users' attention to the data by setting specific colors for data series based on the data values. Similar to the cell alert feature in GridBlox, you can specify several threshold values and apply different colors to the data series based on the threshold values. See Using chart series colors to highlight data for more information.

### **More programmatic control over the legend**

A new `LegendItem` class is added to the `com.alphablox.blox.uimodel.core.chart.common` package to give you programmatic control over the legend items in a chart, such as specification of which legend items to show, the order they should be in, their colors, and their display text. See the "Setting colors and display labels for legend items" section in the topic on "Using chart series colors to highlight data" for more information.

### **New APIs for identifying the data point associated with user interactions**

You can now find out more information on the data point the user acts on in the chart. For example, you can write your own controller for `DoubleClickEvent` to find out exactly which data point in the result set the event applies to. New methods are added to `ChartBrixModel` to allow you to get the unique group members, series members, and filter members for the data point.

### **Custom trendline algorithms**

You can now implement your own trendline algorithm. DB2 Alphablox offers six types of trendlines— linear, logarithmic, polynomial, power, exponential, and moving averages. You can create your own algorithm by extending the `AbstractTrendingAlgorithm` class. This is an API-only enhancement; custom

algorithms do not show up in the trendline selection dialog. See the "trendLines" ChartBlox tag attribute for more information.

## Contribution charts

Contribution charts are similar to "stacked waterfall" charts. They provide a visualization of two related variable series. For example, if a product is on sale, using the contribution chart, you can examine whether this special sale has any "pull effect" on the sales of an adjacent product on the same shelf. See the "contribution" ChartBlox tag attribute for more information.

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## New FastForward template for relational reporting

DB2 Alphablox FastForward is a sample application framework for quickly developing, deploying, and sharing custom analytic views. Application administrators can quickly create and publish reports by selecting report templates and configuring report parameters, and then deploy the new application.

This release adds a new FastForward template for relational data using ReportBlox. You can now easily create a relational reporting application using this sample template with all its built-in features, including easy saving and sharing of personal views of data and easy navigation. This template shows up in the template drop-down list on the FastForward administration page as **Sample Report Blox**.

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## New Alphablox portlet with bookmark persistency

This release provides a new portlet that you can use without any modification. This portlet offers options for users to:

- Dynamically switch data sources
- Turn on and off the menu bar and toolbar

Users can interact with the data using the Blox user interface and create bookmarks for different data views. Public bookmarks created within one portlet are available to other instances of the same portlet on the portal page. This feature allows portal users to compare different data views without having to leave the page.

This AlphabloxPortlets.war file is available in the <alphablox\_dir>/installableApps directory. System administrators can install it using WebSphere Portal's administrative user interface, create public bookmarks from various data views, and specify the bookmark for the default data view when the portlet is loaded by portal users.

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## Printer rendering format based on the Blox UI model

The Printer rendering format (render=printer) generates a view of a Blox's data that is optimized for printing purposes using the browser's built-in printing functionality. In this release, the Printer rendering format has been modified to generate the views based on the same Blox UI model that the DHTML client is built on. This means the data views in the DHTML client will be preserved, including any custom layout such as the butterfly layout or grid spacers.

In the Printer rendering format, the selected page filters are converted to a list that includes the dimension names and their selected members. The menu bar and the toolbar, however, are not included in the generated views.

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## Additional language support

DB2 Alphablox V8.4 adds the support for Turkish.

Below is a list of all languages supported:

- Arabic
- Chinese - Simplified
- Chinese - Traditional
- Czech
- English
- French
- German
- Greek
- Hebrew
- Hungarian
- Japanese
- Korean
- Italian
- Polish
- Portuguese - Brazilian
- Russian
- Spanish
- Turkish

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## Chapter 2. Upgrades and migration information

Before you upgrade or migrate your applications to DB2 Alphablox V8.4, you should review the following potential migration steps. For additional information related to upgrades, please see also the readme file on the DB2 Alphablox CD. If you are migrating from a version older than V8.3, please see the upgrades and migration information in the DB2 Alphablox V8.3 information center.

### Repository-related changes

- If you are using a database for your repository and want to support multiple client locales when upgrading to V8.4, you should make sure that you use a UTF-8 database. Using a non-UTF-8 database can cause problems with double-byte characters when users create bookmarks.
- If you are using a file-based repository and want to support multiple client locales when upgrading to V8.4, you should run the NativeConverter.bat or NativeConverter.sh utility in the <alphablox\_dir>/bin directory after the upgrade. This tool converts your repository from character-based encoding to UTF-8. See the topic on "Migrating a DB2 Alphablox Repository to support multiple locales" in the *Installation Guide*.
- Hyperion Essbase runtime client libraries are no longer included with DB2 Alphablox installation. You need to install the Essbase runtime client library first and run the ChangeEssbase.bat or ChangeEssbase.sh script to have the ARBORPATH point to your Essbase client library before DB2 Alphablox is started. If you are upgrading, you can copy your previous client libraries under <alphablox\_dir>/bin/{nt, eds} to another location and then run the ChangeEssbase utility. The utility no longer allows storing of the library files in the <alphablox\_dir>/bin/ directory.

### Upgrading from a non-English system

Always use the step-by-step installation option to upgrade to V8.4 if your DB2 Alphablox operates in a clustered environment. This allows you to verify the preservation of your existing clustering setup.

### Upgrading from a clustered environment

Always use the step-by-step installation option to upgrade to V8.4 if your previous version is installed on a non-English system. This allows the installer to gather the correct settings from your current environment.

### Microsoft SQL Server 2005 Analysis Services

If you are upgrading to SQL Server 2005 Analysis Services, check the following list for potential migration steps.

- You must install MSXML, version 6 and SQL Server 2005 Analysis Services 9.0 OLE DB Provider, obtainable from Microsoft.
- To connect to Analysis Services in both SQL Server 2000 and SQL Server 2005, you need to install both PivotTable Services 8.0 and Analysis Services 9.0 OLE DB Provider in a side-by-side configuration.
- In cases where you installed PivotTable Services 8.0 after installing Analysis Services 9.0 OLE DB Provider, for the data sources using the OLE DB for OLAP

adapter, you must start the **Provider** string with MSOLAP.2 to connect to SQL Server 2000 Analysis Services data sources or MSLOAP.3 to connect to SQL Server 2005 Analysis Services data sources.

- SQL Server 2005 Analysis Services was re-architected to allow dimensions to truly support multiple hierarchies. Dimensions that contain more than one hierarchy must have the property `HierarchyUniqueNameStyle` set to `IncludeDimensionName`. This allows DB2 Alphablox to determine which dimensions to merge to create a logical dimension, allowing the use of multiple hierarchies.

## FastForward template-related changes

The FastForward application framework has been modified to support multiple locales. You will need to perform the following migration steps for your existing applications that were built on FastForward templates. The steps involve copying the new FastForward Java classes, supporting JSP files, and Blox tag libraries into your application.

After upgrading to DB2 Alphablox V8.4:

1. Back up your application.
2. Go to the `system/ApplicationStudio/FastForward` directory in your DB2 Alphablox installation.
3. Copy the files and folders under the `FastForward` directory, except `WEB-INF`, into the directory where your application is located.
4. Go into the `WEB-INF` directory under `system/ApplicationStudio/FastForward`.
5. Copy the `classes`, `src`, `ui`, and `tlds` directories, into your application's `WEB-INF` directory.

**Important:** If your FastForward-based application has been significantly modified and cannot have your custom JSP overridden, you should, at a minimum, perform the following steps:

1. Back up your application.
2. Go to the `system/ApplicationStudio/FastForward` directory in your DB2 Alphablox installation.
3. Copy `apperror.jsp` and `error.jsp` into your application directory.
4. Go into the `WEB-INF` directory under `system/ApplicationStudio/FastForward`.
5. Copy the `classes` and `src` directories into your application's `WEB-INF` directory.

These steps will leave most of your application intact, but you might need to perform additional steps depending on how your code is customized. Check the DB2 Alphablox support Web site for related technotes.

## General application development-related changes

- Because the Blox user interface is displayed based on the client's locale, if you have custom code that sets the locale, it is no longer needed. The `setLocaleCode()` method has been removed from this release, so make sure you are no longer using this method or the `localeCode` tag attribute in your application.
- The Query Builder tool in the previous releases uses a method that has been removed in this release. When you upgrade to V8.4, if you run into errors

loading the Query Builder tool, your application server is using the previously compiled version. You will need to remove the temporary files for Query Builder from the Application Server's temporary work directory. This will force the application server to recompile the JSP files for the new version of Query Builder.

### DHTML themes-related changes

- The layout strings for the DHTML client theme have been deprecated, and are no longer applied by default. If you want to continue to use them, you need to explicitly apply it using the `BloxModel.setApplyThemeLayout()` method.
- To support bi-directional languages, the default style definition for some of the CSS theme classes have been modified. These changes should not affect your applications. If you have customized the style sheet, you should test your applications to find out how the changes affect you.

Theme classes	Style change
Component border – borders of individual Blox and controls: <code>.csCmpBrdr</code>	The following cell margin setting is removed: <code>cellmargin: 1px;</code>
Interactive buttons: <code>.csIBtnDprsd</code> , <code>.csIBtnDprsdHghlght</code> , <code>.csIBtnHghlghtDprsd</code> , <code>.tlBtdprsd</code> , <code>.csIBtdrpdwnDprsd</code> , <code>.csIBtdrpdwnDprsdHghlght</code>	The following display setting is removed: <code>display: inline;</code>
Horizontal separators: <code>.hsprtr</code>	The following margin, border, width, and height settings have changed: <code>margin: 2px 0px 2px 0px;</code> <code>text-indent: 0px;</code> <code>font-size : 0px;</code> <code>width: 100%;</code> <code>border-bottom: 0px;</code> <code>border-left: 0px;</code> <code>border-right: 0px;</code> <code>height: 0px;</code>
Tree nodes and leaves: <code>.csTrNdLb1</code> , <code>.csTrLfLb1</code> , <code>.csTrNdLb1Slctd</code> , <code>.csTrLfLb1Slctd</code> , <code>.csTrLfLb1</code>	The SPAN element has been removed from these classes.
Calendar component: <code>.csClndrBdy</code> , <code>.csDys</code> , <code>.csWkdy</code> , <code>.csTdy</code> , <code>.csSmDte</code> , <code>.csStDte</code> , <code>.csExprd</code>	Text alignment has changed: <code>text-align: center;</code>

### DB2 Alphablox Cube Server-related changes

Below are some changes that take place when you open an existing cube definition after you migrate to V8.4:

- Cube Server cube definitions are migrated from previous releases to V8.4. The migration is necessary due to the new cube definition metadata features in V8.4. The migration occurs automatically each time the cube definition is read by DB2 Alphablox. If you open a cube definition to edit and then save it, the migrated cube is saved and no longer needs to be migrated. After migration, the version number in the cube definition is 3.0.
- After migration, each level will have one or more level key expressions. There will be one level key expression that is the same as the level expression. There will also be one level key expression for each ancestor level (each key based on an ancestor level will have an expression that is the same as the ancestor's level

expression). If the level key expressions associated with each level after migration do not uniquely define each member in the level, then the cube will no longer start.

- After migration, each dimension will have an 'All' level, but the 'All' level member name will be blank. When the 'All' level member name is blank in the cube definition, the Cube Server will set the member name to 'All' plus the dimension name when the cube starts. For example, a dimension named "Products" will have an 'All' level member named "All Products."
- After migration, all dimensions are of type **Regular**. We recommend that you review your cube definitions and change the type to **Time** for dimensions related to time.
- After migration, all levels are of type **Regular**. You should review the level types, especially for levels in time dimensions.
- After migration, the member cache by default is disabled. When the member cache is disabled, all cube members will be loaded into memory when the cube is started. This behavior is the same as in previous releases.



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## Chapter 3. Enhancement requests addressed

The following enhancement requests have been addressed in the following releases:

- 23060 – Would like an option to turn off sorting while maintaining the sorting indicators in the user interface and related events. This capability is now implemented. DataBlox has a new property `internalSortEnabled` and methods `isInternalSortEnabled()` and `setInternalSortEnabled()`. The default is `true`. If this property is set to `false`, the Blox user interface will show the sorting indicators, but the internal sorting mechanism will be disabled.
- 21752 – Would like to be able to display formatted numbers. This is now implemented. Data format in the Blox user interface is based on the browser's locale setting.



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## Chapter 4. Issues addressed

Reported issues that have been fixed since DB2 Alphablox V8.3 are listed in the following sections. A note may be added at the end of the issue when the fix involves new behaviors or when additional information is available for further clarification.

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### Assembly Workbench and examples-related fixes

- 23329 – Double-byte characters in an e-mail attachment based on the e-mail example do not display correctly in Internet Explorer (e-mail sent as an HTML e-mail does not have this problem). This has been fixed.

**Note:** When the e-mail is sent as an attachment, it is viewed in a browser rather than in an e-mail reader. Internet Explorer displays a page based on the default encoding that the user has specified. While the e-mail attachments generated by DB2 Alphablox are now explicitly set to UTF-8 encoding, users still need to specify in their browser to automatically select the encoding. To do so in Internet Explorer, go to **View** → **Encoding** and select **Auto-Select**. If the encoding is set to a double-byte character language, the attachment will still display the characters incorrectly.

- 23102 – Getting NullPointerException in Query Builder when opening Calculation Editor on merged dimensions. This has been fixed.
- 22013 – The Position Before setting in the Calculation Editor does not work if member names contain colons or curly braces. This has been fixed.

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### Chart-related fixes

- 23324 – The "other" slice in pie charts always appears in English rather than the correct locale. This has been fixed.
- 23116 – Format mask set on y1-axis (the ChartBlox y1FormatMask property) in waterfall charts does not work. This has been fixed.

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### Data-related fixes

- 23136 – The generateQuery() method generates invalid query with Dynamic Time Series in Essbase data sources. This has been fixed.
- 23112 – When multiple cubes have the same dimension, and the selectableSlicerDimension property is set to the dimension in a cube other than the first one, the getSelectableSlicerDimension() method always return the dimension in the first cube. This has been fixed.
- 22620 – The setProperty("hiddenMembers") method does not work if the member name contains commas or semicolons. This has been fixed.

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### Grid-related fixes

- 23099 – Cannot hide multiple columns selected in the grid with relational data. This problem occurred only to relational data sources and has been fixed.
- 22748 – With a short GridBlox, when the grid space is limited, the horizontal and vertical scroll bars might not appear. If the scroll bars appear, you cannot scroll to see the last row or column. This problem has been fixed.

**Note:** Now when the areas for the scroll bars are too small for both the scroll buttons and the scroll bars, the buttons are automatically removed so you can scroll to see the last row or column in most cases. In Firefox, there is still a limit to how small the grid can go before data rows disappear. This is a Firefox limitation.

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## General DHTML client and UI components-related fixes

- 23319 – The title for the **Organize Bookmarks...** dialog contains question marks in simplified Chinese. This has been fixed.
- 23079 – Choosing to **Unhide All** from a grid with compressed layout (<bloxui:compressLayout>) results in an `ArrayIndexOutOfBoundsException` exception. This has been fixed.
- 23067 – Getting `NullPointerException` when you click OK twice in the **Undo History** dialog (by choosing **Edit** → **History** in the menu bar. This has been fixed.
- 23014 – After selecting **Edit** → **Select All**, the **Edit** → **Copy** menu item is not available. This is now fixed.
- 22920 – Calling the `DHTML CheckBox.setStyle( new Style(true,false,false) )` method does not set the style on the title text next to the `CheckBox`. This has been fixed.
- 22905 – The drag-and-drop behavior in grids in expand/collapse mode (`expandCollapseMode="true"`) is inconsistent. This has been fixed.

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## Alphablox Cube Server-related fixes

- 23355 – Adding a slicer to the PageBlox for an Alphablox Cube Server cube that contains a calculated member causes `com.alphablox.util.NotFoundException`. This has been fixed.
- 23211 – Drilling down on a relational cube generates out of memory exception when the returned result exceeds the maximum rows and maximum columns settings that are specified in the DB2 Alphablox Admin Pages. This has been fixed.

**Note:** DB2 Alphablox will now enforce the maximum rows and maximum columns specification prior to constructing the result set in order to reduce the risk of out of memory condition. If suppression is enabled, the limits are enforced on the result set size *before* rows or columns are suppressed.

- 23199 – If a cube name contains certain Chinese characters, the cube will not automatically start when the server is started. This has been fixed.

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## ReportBlox-related fixes

- 22933 – PdfBlox `logoSource` property does not work. This has been fixed.

**Note:** When specifying the location for the image, you can specify either an absolute path or a relative path. An absolute path is a path to the image in the file system. For example, `logoSource="file:///C:\\alphablox\\webapps\\images\\logo.gif"`. Note that you need to escape the back slashes in the path. A relative path is a path relative to your DB2 Alphablox installation. For example, `logoSource="/repository/theme/logo.gif"`.

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## Platform-related fixes

- 23342 – After the parameters of an existing data source are changed using the set command from the telnet console on the lead node, DB2 Alphablox cannot connect to that data source from the normal node without restarting the cluster. This has been fixed.
- 23316 – Hebrew characters are not right-aligned in the grid. This has been fixed.
- 23150, 23122 – When the lead node in a cluster stops or crashes, the other nodes in the cluster hang. This has been fixed.
- 23082 – Using multiple Blox tags in WebLogic 8.1.4 produces `java.lang.NullPointerException`. This has been fixed.
- 22917, 22855 – Deleting `PresentBlox` using `bloxContext.deleteBlox()` does not delete its inner Blox. This has been fixed.

**Note:** This method also works on `ReportBlox`.

- 22904 – When DB2 Alphablox is installed behind WebSphere Secure Sockets Layer (SSL), users receive errors complaining about trouble communicating with DB2 Alphablox. This has been fixed.

---

## Documentation-related fixes

- 23336 – `Cell.getDoubleValue()` does not generate `java.lang.NumberFormatException` as documented. This has been fixed in the Javadoc documentation. The `NumberFormatException` is no longer thrown, but is still declared for the purpose of backward compatibility.
- 23208 – The `GridBlox rowHeadingsVisible="false"` property does not hide row headers in the grid. The documentation for this property was incorrect. The `rowHeadingsVisible` property does not define the visibility of row headers, but the visibility of row dimension names above the row headings. This has been fixed.
- 22864 – The Microsoft IIS post-installation information in the Installation Guide is specific to Tomcat, but is in the general post-installation section for IIS v6. The information has been modified to say that it is for Tomcat only, and for WebSphere and WebLogic, users should consult their documentation.



---

## Chapter 5. Known issues and workarounds

This section describes operational issues for DB2 Alphablox 8.4 and its assembled applications. Whenever possible, instructions for a workaround are provided. Use the DB2 Alphablox tracking number when asking DB2 Alphablox Technical Support for details on a particular issue. When running DB2 Alphablox 8.4 applications, you might encounter problems with a specific web server or web browser. IBM is aware of some of these problems and in some cases can provide you with workarounds for them. There are also known Hyperion Essbase, and Microsoft Analysis Services issues that might affect your applications. See “Known data source issues and workarounds” on page 23 for details.

---

### Known installation issues on Tomcat

This section lists known issues and workarounds for installation on Tomcat for the DB2 Alphablox V8.4 release.

Tracking #	Description	Workaround
22863	IBM JDK v1.4.2 SR2 and SR3 do not work if you are using Tomcat 3.2.4.	Use the 1.4.2 GA Release version (Windows/IA32, cn1420-20040626) or SR4 instead.
21217	DB2 Alphablox service will not run if Tomcat is installed in a directory that contains spaces.	Tomcat NT service does not run properly when Tomcat is installed in a directory that contains spaces.  <b>Workaround:</b> Rename the Tomcat installation directory name.

---

### Known documentation installation issues

This section lists known issues and workarounds for the DB2 Alphablox documentation installer.

Tracking #	Description	Workaround
23216	Documentation installer does not work on Linux with kernel 2.6.	The DB2 Alphablox documentation installer requires IBM JRE 1.4.2. This JRE version requires the following distribution libraries: <ul style="list-style-type: none"><li>• compat-libstdc++-33-3.2.3 and xorg-x11-deprecated-libs-6.8.1 (Intel® Architecture, PPC, and PPC64)</li><li>• compat-libstdc++-295-2.95.3 and xorg-x11-deprecated-libs-6.8.1 (zSeries®)</li></ul> When running the documentation installer on a Linux system, if you encounter an error message saying that the installer is not able to run in graphical mode, you need to install the required library from your distribution CDs.

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### General installation issues

This section lists general notes and installation issues for the DB2 Alphablox 8.4 release.

Tracking #	Description	Workaround
23740	When both Microsoft SQL Server 2000 JDBC Driver and the Microsoft SQL Server 2005 JDBC Driver are enabled, running the Repository Conversion Utility to convert to a Microsoft SQL Server 2005 database repository produces errors.	There is a known issue with the 2000 version of the JDBC driver incorrectly accepting the "jdbc:sqlserver://" URL prefix if it is loaded first. When you use the Repository Conversion Utility to convert to a Microsoft SQL Server 2005 database, the utility will connect to the Microsoft SQL Server 2000 JDBC Driver first. This results in errors stating that the Microsoft SQL Server 2000 JDBC Driver is unable to perform the operation. The workaround is to temporarily hide the Microsoft SQL Server 2000 JDBC Driver from the Repository Conversion Utility by either renaming the 2000 version of the JDBC driver or deleting it before starting the Repository Conversion Utility.
19134	When you upgrade from Alphablox 5 to DB2 Alphablox to use WebSphere or WebLogic Application Server, and your repository is currently an Application Server connection pooling data source, then after the upgrade, DB2 Alphablox resets the data source type to a normal (non-connection pooled) data source.	Run the Repository Conversion Utility to reactivate the usage of a Web Application Server connection pooling data source.

## Known platform issues

This section describes general platform issues and provides a table containing the known issues and workarounds for DB2 Alphablox 8.4.

### User interface

Tracking #	Description	Workaround
18795	If you have multiple calculated members on a grid, you can bring up the member filter to reorder the members. If you position the calculated members next to each other, but in a different order to the order specified in the <code>calculatedMembers</code> property, they will not be reordered and will keep the order specified in the <code>calculatedMembers</code> property.	Modify the <code>calculatedMembers</code> property to reflect the desired order.

### Charting

Tracking #	Description	Workaround
22452	SAP BW and Microsoft Analysis Services runtime calculated members do not appear in 3D bar charts.	3D charts only show the lowest generation of members in the query. OLE DB for OLAP runtime calculated members have a generation level of 1 (the highest level), and therefore will not appear in 3D charts. There is no workaround.



## CommentsBlox

Tracking #	Description	Workaround
19355	Displaying a GridBlox containing cells with Comments from Comments Collection with more than 10 dimensions will fail on DB2 UDB data sources.	Identify which indexes can be dropped to keep the indexes for no more than 10 dimensions. You can also create different comments collections if your application can be segregated by the dimensions it is accessing.
17873	When DB2 Alphablox is installed behind WebSphere or WebLogic, if you attempt to save a Comments collection against an Oracle Connection Pooling data source provided by the Application Server, the Comments Collection will not be saved properly.	Instead of using the Connection Pool data source provided by the Application Server, connect using a data source created by the DB2 Alphablox Administration pages (e.g. under the Administration tab -> Data Sources).
17200	When enabling comments in a PresentBlox, if a nested <pre>&lt;blox:grid ...   commentsEnabled="true" .../&gt;</pre> tag appears after the <blox:data ...> tag, comments will not be properly enabled.	Place the <pre>&lt;blox:grid ...   commentsEnabled="true" .../&gt;</pre> tag before the <blox:data ...> tag.

## Data manager and data connection

Tracking #	Description	Workaround
23212	Drilling down on ragged hierarchies in SQL Server 2005 Analysis Services data sources fails.	No workaround. In SQL Server 2005 Analysis Services, the provider string parameter MDX Compatibility=2 works differently with ragged hierarchies when compared with Microsoft Analysis Services 2000. Microsoft has acknowledged this problem and states that it will be fixed in service pack 1.
23144	In SQL Server 2005 Analysis Services, Microsoft re-architected the drillthrough feature. Drillthrough operations now return very technical column headers built from the column names of the relational tables.	In your relational report based on ReportBlox, use the TextBlox columnHeader tag to rename these columns with names that are more meaningful to your users.

## DHTML client

Tracking #	Description	Workaround
21609	When a window containing a Blox is opened with a Javascript window.open() call, when this window is closed, dialogs launched from the window do not closed automatically and are left open.	Adding code such as the example below will fix the problem: <pre>&lt;script&gt;   window.onbeforeunload = function(){     presentBlox.closeAllDialogs();   } &lt;/script&gt;</pre>

Tracking #	Description	Workaround
20702	With Internet Explorer v5.5, customizing the colors and styles of the browser's native scroll bars via CSS causes the grid and chart in a PresentBlox to move to the bottom of the PresentBlox display area when you hover over the menu items, toolbars, or toolbar buttons.	This is only an issue with Internet Explorer v5.5, not v6. Either avoid using this Internet Explorer-specific CSS technique, or apply the custom styles only when the browser is not Internet Explorer v5.5.
20813	When a GridBlox's border color for data cells, column headers and row headers is set in <themeName>_DHTML.css and the Blox is exported to PDF, the background color of the entire GridBlox is also changed.	None. Setting a table's border is a Microsoft attribute. There is no public standard that applies to this property, and underlying PDF engine does not support this attribute. See this document on <a href="http://msdn.microsoft.com">http://msdn.microsoft.com</a> .
19068	From the Tools > Internet Options menu of Internet Explorer, changing the "Check for newer versions of stored pages" option setting on the General > Temporary Internet Files > Settings panel from the default value of "Automatically" to "Every visit to page" can, in rare situations, cause the browser to draw columns incorrectly.	Leave the setting at its default value of Automatically. This is an issue with Internet Explorer.
17281	Altering the !DOCTYPE element to specify the Strict declaration causes the grid to display incorrectly (for example, <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Strict//EN">)).	Either do not specify a !DOCTYPE element, or use the Transitional or Frameset declarations.

## FastForward

Tracking #	Description	Workaround
16790	If multiple FastForward Administrators update a template simultaneously, the most recently saved changes will overwrite previous changes.	None.
16052	The FastForward templates will not work against relational cubes.	None.

## DB2 Alphablox Cube Server

Tracking #	Description	Workaround
23499	Problems querying a DB2 Alphablox Cube Server cube when a member in a dimension has the same name as the dimension.	The 'All' level member should not have the same name as the dimension. For example, if your dimension is named "All Markets," then do not set the 'All' level member name to be "All Markets." Rename your dimension or the 'All' level member so there are no name conflicts.

## Relational reporting

Tracking #	Description	Workaround
22350	When a Blox is rendered from right-to-left for bidirectional languages, any non-RTL characters (defined in the Unicode Standard), such as the percentage signs ("%"), may change their position so the rendered output may be different from what is displayed in the browser.	There is no workaround at this time. The PDF rendering engine does not currently support the Unicode Bidirectional Algorithm.
19211	Due to the resolution of defect #19186, toggling the sort option in a relational report only toggles if the sort should be ascending or descending. We no longer change the flag which determines if missing values should appear first or last during a sort to match the isAscending flag.	None.
18997	Using the browser's back button after performing a grouping operation on a page with a relational report will repeat the grouping operation on the first member of the report.	None.

## PDF rendering

Tracking #	Description	Workaround
22916	Embedded HTML escape code in the page filter drop-down list appears as HTML escape code when the page is exported to PDF.	Use the Unicode notation (\uXXXX) instead of HTML escape code. For example, instead of &#45; for a minus sign ("-"), use \u002d.
22350	When a Blox is rendered from right-to-left (RTL) for bidirectional languages, any non-RTL characters (defined in the Unicode Standard), such as the percentage signs ("%"), may change their position in the rendered output. As a result the PDF output may be different from what is displayed in the browser.	There is no workaround at this time. The PDF rendering engine does not currently support the Unicode Bidirectional Algorithm. Depending on the browser version and version of Unicode Standard it supports, the specific non-RTL characters that may change their positions in the rendered output may be different.
17294	If you are installed behind WebLogic, and have your WebLogic Server logging level set to INFO, PDF generation may occasionally generate a socket exception on the console.	This message can be safely ignored.
13617	In order to use render to PDF when running DB2 Alphablox behind a Web server, you must use the fully qualified host name.	None.

## Server-side programming

Tracking #	Description	Workaround
19213	The methods <code>setBookmarkFilter</code> and <code>getBookmarkFilter</code> have been moved from the Blox class <code>com.alphablox.blox.Blox</code> to <code>ViewBlox</code> and <code>DataBlox</code> .	These methods continue to be available to <code>DataBlox</code> and all the data presentation Blox ( <code>ChartBlox</code> , <code>DataLayoutBlox</code> , <code>GridBlox</code> , <code>PageBlox</code> , and <code>PresentBlox</code> ) and will not affect existing applications. However, if you have code that typecasts a data presentation Blox to a Blox object to use these two methods, the code needs to be changed.
18608	The <code>MemberSelectEvent.getNewMemberSelections</code> method will return NULL if any of the selections in the Member Filter are function calls, such as "Descendents of <member>."	To avoid a null pointer exception in your JSPs, check for a NULL return value from this method, and handle it accordingly.
13782	You cannot access the <code>AASUserAuthorizedEnabled</code> property using the tag attribute <code>AASUserAuthorizedEnabled</code> . This is because the <code>blox.tld</code> contains an incorrect entry for the property <code>AASUserAuthorizationEnabled</code> .	When accessing the <code>AASUserAuthorizationEnabled</code> property using JSP tags, you must use the tag attribute <code>useAASUserAuthorization</code> instead.
12380	The method <code>waitOnBusy()</code> does not work when called from <code>DataBlox</code> .	If possible, use <code>waitOnBusy()</code> from the data presentation Blox (e.g., <code>ChartBlox</code> , <code>GridBlox</code> , <code>PresentBlox</code> ) instead.

## Telnet console

Tracking #	Description	Workaround
21048	DB2 Alphablox telnet session uses UTF-8 to communicate with the telnet client. Windows does not have the capability of setting the encoding to UTF-8. As a result, Windows' native telnet console will not display properly on systems running double-byte characters such as Chinese and Japanese.	Use an alternative telnet client such as PuTTY.

## WebLogic

Tracking #	Description	Workaround
18853	Running DB2 Alphablox behind WebLogic with IIS as the Web server and NTLM as the authentication method is a supported configuration. However, if you try to add a role to a user through the "user" tab, the role does not get applied.	This can be done via the Roles tab. Go to the "roles" tab and select the desired role (e.g. <code>AlphabloxAdministrator</code> ). Move the desired user from the Available Users column to the Member Users column.

## WebSphere

Tracking #	Description	Workaround
17894	When DB2 Alphablox is installed behind WebSphere 5, editing certain applications parameters for an existing application from the DB2 Alphablox home page's Administration tab > Applications page, will not immediately update the application.	Editing the applications parameters and saving the changes merely recreates a new .ear file. This application must be "updated" via the WebSphere Administration tools to redeploy the application with the changes.

## DB2 Alphablox in general

Tracking #	Description	Workaround
13750	IIS: Client cannot communicate with DB2 Alphablox from a JSP file when DB2 Alphablox is running behind IIS.	The steps to register an application on an external Web server are documented in the <i>Administrator's Guide</i> > Application Definition > Steps to Register An Application on an External Web Server.

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## Known data source issues and workarounds

This section documents known DB2 OLAP Server™, Hyperion Essbase, and Microsoft OLAP Services that affect DB2 Alphablox 8.4. The DB2 OLAP Server and Hyperion Essbase issues are listed and, as available, details, examples, and workarounds follow each issue. For some issues, tracking numbers are provided in parentheses as a reference if you contact Technical Support to obtain more information. DB2 Alphablox and Hyperion tracking numbers are clearly marked, where available. You can also access the Hyperion Technical Support Web site for more details on the latest Essbase patch.

## Known DB2 OLAP Server and Hyperion Essbase issues

This section lists known issues for DB2 OLAP Server and Hyperion Essbase databases.

- For On AIX® systems, the ESSLANG variable is always set to English. Since this setting needs to match the Essbase server's setting, and there's no way to get that information programmatically, you need to manually set the locale in `essbasesetup.sh` before starting DB2 Alphablox. The `essbasesetup.bat` file is located inside `<db2alphablox_dir>/bin`. For example, to set the locale to Japanese, the ESSLANG variable might be set to `Japanese_Japan.JapanEUC@Binary`, where the value string is formed by `<language>_<territory>.<code page name>@<sortsequence>`. For details on locale specifications, see the Database Administrator's Guide for DB2 OLAP Server or Hyperion Essbase.
- When connecting to Essbase data sources via Hyperion Essbase Deployment Services (EES), numeric values will improperly be returned as strings for Essbase native drillthrough reports. This is a Hyperion issue. The workaround is to bypass EES and connect to Essbase natively. (Hyperion Case #370427, DB2 Alphablox tracking #18668)
- If the Essbase `essbase.cfg` configuration file has the `SSLOGUNKNOWN` property changed from its default value to `FALSE`, retrieving a Bookmark may display members which no longer exist in an outline. To avoid the problem, keep the

SSLOGUNKNOWN property set to its default value of TRUE. This will enable DB2 Alphablox to detect the problem and return the appropriate error message. (DB2 Alphablox tracking #17941).

- If you use Query Builder to construct a query against an Essbase data source using a calculated column name that appears as a number (e.g. 400), a calculated column error will be returned. The workaround is to rename the calculated column to something non-numeric. (DB2 Alphablox tracking #14491).
- When using the {RENAME} command for a member, the interactivity in the grid is lost (no drilldown), any changes made to the members in the Page axis are ignored, any renamed members are not displayed in the chart. (DB2 Alphablox tracking #12591).
- Using the ORDERBY command in your report specification returns members as a concatenated string instead of returning the discrete members in a comma delimited list. This causes an error to occur. Hyperion case #120488.
- Using { PRINTRROW "n" } with <PAGE member clauses in your report specification causes an error. Hyperion case #183804.

## Known Microsoft Analysis Services issues

### Microsoft SQL Server 2005 Analysis Services specific issues

- Drilling down on ragged hierarchies in Microsoft SQL Server 2005 Analysis Services data sources fails, because the provider string parameter MDX Compatibility=2 works differently with ragged hierarchies from that in Microsoft Analysis Services 2000. Microsoft has acknowledged this problem and states that it will be fixed in service pack 1.
- Writeback to leaf cells does not work properly. The DB2 Alphablox team is working in conjunction with Microsoft to determine how to fix this issue.

### When Connecting Using Certain Connection Strings

There is a known issue with DB2 Alphablox connecting to a MSAS data source, when the connection string is set like the example below and when DB2 Alphablox is started as a service.

```
MSOLAP;Execution Location=3;Client Cache Size=0;
```

This change is done by modifying the Provider field located on the Alphablox admin pages for MSAS data source definitions. It is recommended you start DB2 Alphablox as a console application. However, if you must start it as a service, follow these directions. In order for DB2 Alphablox to connect, the logon account that starts the DB2 Alphablox Service must be modified, otherwise you will get an Invalid Parameter error.

1. From the Control Panel open the Administrative Tools folder and select Services.
2. Bring up the properties for your DB2 Alphablox service.
3. Select the Log On tab and select the **This Account** radio button.
4. Select a domain account. This domain account must have the Local Security setting "Log on as a service." If not, from the Control Panel open the Administrative Tools folder and select Local Security Policy and give this domain account the required right.

This will allow DB2 Alphablox to connect with the MSAS data source, however, the username and password which is used to connect to the data source will be the domain account mentioned earlier. This is a known issue and is being investigated.

## **OLAP Services and Authentication**

Microsoft Analysis Services uses Windows-based authentication. To use Windows-based authentication in DB2 Alphablox applications that access Microsoft SQL Server OLAP Services, the userName and password properties passed by DB2 Alphablox to Microsoft OLAP Services must be Windows users and passwords.

If DB2 Alphablox and Microsoft SQL Server OLAP Services are in different domains, they must be trusted Windows domains.

For details on setting up your Windows machines to access OLAP Services and/or Analysis Services, see the *Administrator's Guide*.

## **Installing a User with Different Locale**

If you are installing on a machine where the locale of the user who is logged in is different from the locale of the machine, the DB2 Alphablox will not correctly determine if the MDAC components are installed. If you encounter this problem, set your locale to the machine locale. (DB2 Alphablox Tracking #13294)





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## Chapter 6. Removed functionality and platform support

The following deprecated features are removed in this release:

- Java client
- HTML Links client (also known as the thin client)
- SmartCacheBlox
- StatusBlox
- SpreadsheetBlox
- The **Automatic Save Enabled** option in the application definition page in the DB2 Alphablox Admin Pages.

The following platforms are no longer supported:

- Solaris 8
- WebSphere Portal 5.1.0, 5.1.0.1
- AIX 5.1 (32-bit and 64-bit)
- SunOne (iPlanet) 4.1
- Sybase for database-based repository

With the availability of the DHTML client since V5 and with the DHTML client's superior flexibility and extensibility, the Java client and the thin client had been deprecated and are removed in this release. SmartCacheBlox and StatusBlox apply to Java-client only, and therefore are also removed. For a complete list of removed methods, see "Removed Blox methods" and the Blox API change list (in Javadoc format).

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### Removed Blox methods

Blox methods that only apply to the Java, links, or HTML clients have been removed. These methods are organized based on the Blox they are associated with.

#### General Blox methods for AbstractBlox

The following methods for AbstractBlox have been removed. Since AdminBlox, BookmarksBlox, CommentsBlox, ContainerBlox, DataBlox, RepositoryBlox, ResultSetBlox, and StoredProceduresBlox extend AbstractBlox, these changes apply to them as well.

- getClassid(), setClassid()
- getCodebase(), setCodebase()
- getType(), setType()
- isMayscriptEnabled(), setMayscriptEnabled()
- updateProperties()

#### General Blox methods for DataViewBlox

The following methods for DataViewBlox have been removed. Because ChartBlox, DataLayoutBlox, GridBlox, MemberFilterBlox, PageBlox, and PresentBlox extend DataViewBlox, these changes apply to them as well.

- getBorder(), setBorder()

- `getBorderTitle()`, `setBorderTitle()`
- `getLocaleCode()`, `setLocaleCode()`

### **ChartBlox**

- `getChartFrameRectangle()`, `setChartFrameRectangle()`
- `getFootnoteRectangle()`, `setFootnoteRectangle()`
- `getLegendRectangle()`, `setLegendRectangle()`
- `getPieFrameRectangle()`, `setPieFrameRectangle()`
- `getSubtitle()`, `setSubtitle()`
- `getSubtitleRectangle()`, `setSubtitleRectangle()`
- `getSubtitleStyle()`, `setSubtitleStyle()`
- `getTitleRectangle()`, `setTitleRectangle()`
- `getToolBarPosition()`, `setToolBarPosition()`
- `isLegendWrapped()`, `setLegendWrapped()`
- `getWindowStyle()`, `setWindowStyle()`

### **DataBlox**

- `getConsoleMessageLevel()`, `setConsoleMessageLevel()`
- `getControlStyle()`, `setControlStyle()`
- `getEventBookmarkDelete()`, `setEventBookmarkDelete()`
- `getEventBookmarkLoad()`, `setEventBookmarkLoad()`
- `getEventBookmarkRename()`, `setEventBookmarkRename()`
- `getEventBookmarkSave()`, `setEventBookmarkSave()`
- `getEventDrillDown()`, `setEventDrillDown()`
- `getEventDrillUp()`, `setToolBarFloatable()`
- `getEventError()`, `setEventError()`
- `getEventFilterChanged()`, `setEventFilterChanged()`
- `getEventHideOnly()`, `setEventHideOnly()`
- `getEventKeepOnly()`, `setEventKeepOnly()`
- `getEventPivot()`, `setEventPivot()`
- `getEventRemoveOnly()`, `setEventRemoveOnly()`
- `getEventShowAll()`, `setEventShowAll()`
- `getEventShowOnly()`, `setEventShowOnly()`
- `isThinApplet()`, `setThinApplet()`

### **DataLayoutBlox**

- `getWindowStyle()`, `setWindowStyle()`

### **GridBlox**

- `getCellBandingStyle()`, `setCellBandingStyle()`
- `getCellMenuItemName()`, `setCellMenuItemName()`
- `getCellStyle()`, `setCellStyle()`
- `getColumnHeadingStyle()`, `setColumnHeadingStyle()`
- `getDataColumnsPerPage()`, `setDataColumnsPerPage()`
- `getDataRowsPerPage()`, `setDataRowsPerPage()`
- `getEventAddComments()`, `setEventAddComments()`

- `getEventCellMenuItem()`, `setEventCellMenuItem()`
- `getEventDisplayComments()`, `setEventDisplayComments()`
- `getEventEditCellEnd()`, `setEventEditCellEnd()`
- `getEventEditCellStart()`, `setEventEditCellStart()`
- `getEventHeaderLink()`, `setEventHeaderLink()`
- `getEventHeaderMenuItem()`, `setEventHeaderMenuItem()`
- `getEventMemberClick()`, `setEventMemberClick()`
- `getEventTriggerDrillThrough()`, `setEventTriggerDrillThrough()`
- `getGenerationStyle()`, `setGenerationStyle()`
- `getHeadingStyle()`, `setHeadingStyle()`
- `getRowHeadingStyle()`, `setRowHeadingStyle()`
- `getToolBarPosition()`, `setToolBarPosition()`
- `isAlwaysShowLastColumn()`, `setAlwaysShowLastColumn()`
- `isAlwaysShowLastRow()`, `setAlwaysShowLastRow()`
- `isHidePlusMinus()`, `setHidePlusMinus()`
- `isHtmlColumnHeadersWrapped()`, `setHtmlColumnHeadersWrapped()`
- `isHtmlShowFullTable()`, `setHtmlShowFullTable()`
- `isPaginate()`, `setPaginate()`
- `isToolBarFloatable()`, `setToolBarFloatable()`

### **PageBlox**

- `getPagePanelType()`, `setPagePanelType()`
- `getToolBarPosition()`, `setToolBarPosition()`

### **PresentBlox**

- `getDataLayoutMaxWidth()`, `setDataLayoutMaxWidth()`
- `getToolBarPosition()`, `setToolBarPosition()`
- `getWindowStyle()`, `setWindowStyle()`
- `isIBarVisible()`, `setIBarVisible()`
- `isToolBarFloatable()`, `setToolBarFloatable()`

### **RepositoryBlox**

- `delete3x()`
- `getConsoleMessageLevel()`, `setConsoleMessageLevel()`
- `getUsersGroups()`
- `isThinApplet()`, `setThinApplet()`
- `list3x()`
- `load3x()`
- `loadBytes3x()`
- `rename3x()`
- `save3x()`
- `search3x()`

### **ToolBarBlox**

- `getAppletList()`, `setAppletList()`
- `isButtonBordered()`, `setButtonBordered()`

## FormPropertyLinkException for FormBlox

- `getNestedException()`, `setNestedException()`
- 

## Removed repository-related methods

This section lists all repository-related methods that have been removed in this release.

### **com.alphablox.blox.repository.Application**

- `isAutosave()`
- `isHtmlLinks()`

### **com.alphablox.blox.repository.Server**

- `getClientBuildVersion()`
  - `getClientIncrementVersion()`
  - `getClientMajorVersion()`
  - `getClientMinorVersion()`
  - `getClientVersion()`
  - `getMinimumClientBuildVersion()`
  - `getMinimumClientIncrementVersion()`
  - `getMinimumClientMajorVersion()`
  - `getMinimumClientMinorVersion()`
  - `getMinimumClientVersion()`
- 

## Removed methods in Blox UI Model

This section lists methods in the Blox UI Model (the `com.alphablox.blox.uimodel.*` packages) that have been removed in this release.

### **BloxController**

- `actionFileExportToPDF_FOP()`
- `applyBorderTitle()`
- `applyToolBarFloatable()`

### **PageBrixController**

- `applyPagePanelType()`
- 

## Removed constant field values

Constant field values removed from this release are organized based on the Blox they are associated with. Fields for the Blox UI model are also listed.

### **AbstractBlox**

- `RENDER_HTML`
- `RENDER_JAVA`

### **RepositoryBlox**

- `VISIBILITY_PUBLIC` (Use `RepositoryBlox.VISIBILITY_APPLICATION` instead)

## Charting package in Blox UI model

Axis:

- labelLayoutMap

BarDataSeries:

- barStyleMap
- dataLabelPositionMap

ChartGrid:

- lineLayoutMap
- lineTypeMap

ChartFillPattern:

- fillTypeMap
- imageModeMap

ChartLineSeries:

- lineTypeMap

ChartModelConstants:

- imageModeMap
- lineTypeMap

ChartRegionStyle:

- borderStyleMap
- imageModeMap

ChartSymbol:

- shapeMap
- styleMap

Dial:

- borderTypeMap
- ticPositionMap

DialNeedle:

- needleTypeMap

Legend:

- legendLayoutMap
- legendPositionMap

LineDataSeries:

- lineTypeMap



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## Chapter 7. Deprecated APIs

This section lists removed features and deprecated properties, methods, classes, interfaces, and fields, and the replacements for the deprecated functionality.

Deprecated APIs receive support for a limited time but are no longer a part of strategic product direction. IBM recommends eliminating their use as soon as possible. Warning messages appear in the browser console whenever DB2 Alphablox encounters a deprecated API. Use these messages to identify application pages requiring changes.

For IBM software support lifecycle policy, see the IBM Software Support Lifecycle Web site at <http://www.ibm.com/software/info/supportlifecycle/index.html>.

---

### Deprecated APIs

The table below lists the methods that are deprecated in this release.

Deprecated Methods	New Methods
For pre-event processing (event filters): <ul style="list-style-type: none"><li>• <code>addBookmarkDeleteFilter()</code>, <code>removeBookmarkDeleteFilter()</code></li><li>• <code>addBookmarkLoadFilter()</code>, <code>removeBookmarkLoadFilter()</code></li><li>• <code>addBookmarkRenameFilter()</code>, <code>removeBookmarkRenameFilter()</code></li><li>• <code>addBookmarkSaveFilter()</code>, <code>removeBookmarkSaveFilter()</code></li><li>• <code>addCollapseFilter()</code>, <code>removeCollapseFilter()</code></li><li>• <code>addDrillDownFilter()</code>, <code>removeDrillDownFilter()</code></li><li>• <code>addDrillThroughFilter()</code>, <code>removeDrillThroughFilter()</code></li><li>• <code>addDrillUpFilter()</code>, <code>removeDrillUpFilter()</code></li><li>• <code>addExpandFilter()</code>, <code>removeExpandFilter()</code></li><li>• <code>addHideOnlyFilter()</code>, <code>removeHideOnlyFilter()</code></li><li>• <code>addHideOnlyFilter()</code>, <code>removeHideOnlyFilter()</code></li><li>• <code>addKeepOnlyFilter()</code>, <code>removeKeepOnlyFilter()</code></li><li>• <code>addMemberSelectFilter()</code>, <code>removeMemberSelectFilter()</code></li><li>• <code>addPivotFilter()</code>, <code>removePivotFilter()</code></li><li>• <code>addQueryFilter()</code>, <code>removeQueryFilter()</code></li><li>• <code>addRemoveOnlyFilter()</code>, <code>removeRemoveOnlyFilter()</code></li><li>• <code>addShowAllFilter()</code>, <code>removeShowAllFilter()</code></li><li>• <code>addShowOnlyFilter()</code>, <code>removeShowOnlyFilter()</code></li><li>• <code>addSwapAxisFilter()</code>, <code>removeSwapAxisFilter()</code></li></ul>	<code>addEventFilter()</code> , <code>removeEventFilter()</code>
For post-event processing (event listeners): <ul style="list-style-type: none"><li>• <code>addChartPageFilter()</code></li><li>• <code>removeChartPageFilter()</code></li></ul>	<code>addEventListener()</code> , <code>removeEventListener()</code>

Deprecated Methods	New Methods
<p>Common Blox methods:</p> <ul style="list-style-type: none"> <li>• display()</li> <li>• render()</li> <li>• renderHtmlHeader()</li> <li>• renameBookmark()</li> <li>• restoreBookmark()</li> </ul>	<ul style="list-style-type: none"> <li>• display(), render(), and renderHtmlHeader() now take BloxRequest instead of HttpServletRequest, and BloxResponse instead of HttpServletResponse.</li> <li>• Use BookmarksBlox.getBookmark() to rename (resave) a bookmark.</li> <li>• Use loadBookmark() to restore a bookmark.</li> </ul>
<p>FormBlox:</p> <ul style="list-style-type: none"> <li>• TimeUnitSelectFormBlox.setMultiple()</li> <li>• SelectFormBlox.setMultiple()</li> <li>• MemberSelectFormBlox.setMultiple()</li> <li>• DimensionSelectFormBlox.setMultiple()</li> <li>• CubeSelectFormBlox.setMultiple()</li> </ul>	<p>Use setMultipleSelect() instead.</p>
<p>RepositoryBlox:</p> <ul style="list-style-type: none"> <li>• killSession()</li> <li>• logout</li> </ul>	<p>No replacement.</p>
<p>com.alphablox.blox.repository:</p> <ul style="list-style-type: none"> <li>• Application.getContextName()</li> <li>• Application.getEntApp()</li> <li>• Cube.createCubeDefinition() (four variations)</li> <li>• Cube.setDataSourceName()</li> <li>• DataSource.testConnection(HttpServletRequest)</li> <li>• Server.getClusteringMaxHosts()</li> <li>• Server.getClusteringStartupWait()</li> <li>• Server.getMaxCubes()</li> <li>• Server.getSmtServer()</li> <li>• Server.isMaxcubesEnabled(), Server.getMaxCubes()</li> </ul>	<ul style="list-style-type: none"> <li>• For the name of an enterprise application, use Application.getJ2EEAppName(), and getModuleName().</li> <li>• To create a Cube object and a DataSource object, use AdminBlox.createCubeDefinition() and AdminBlox.createDataSource().</li> <li>• The DataSource.testConnection() method now takes BloxRequest instead of HttpServletRequest.</li> <li>• The Server.getClusteringMaxHosts() method now always returns 10. The actual number of hosts in the cluster is unlimited.</li> <li>• The Server.getClusteringStartupWait() method always returns 60. The actual startup time is based on the clustering inter-server protocol and can not be tuned.</li> <li>• The Server.getMaxCubes() method now always returns 0.</li> <li>• For Server.getSmtServer(), use your Web application's context parameters, or any other preferred way of setting attributes outside of DB2 Alphablox.</li> <li>• The Server.isMaxCubesEnabled() method has no replacement, and always returns false.</li> </ul>
<p>com.alphablox.blox.uimodel.BloxModel:</p> <ul style="list-style-type: none"> <li>• setApplyThemeLayout()</li> </ul>	<p>No replacement.</p>
<p>com.alphablox.blox.uimodel.core.DateChooser:</p> <ul style="list-style-type: none"> <li>• getImageURL()</li> <li>• isThemeBasedImage()</li> </ul>	<p>Use getIcon().getImageURL() and getIcon().isThemeBasedImage() instead.</p>



Deprecated Methods	New Methods
com.alphablox.blox.pdfreport.PDFReport: addButton(), getBlox(), getBloxList(), getPrintable(), resetPrintable(), setPrintable()	All methods now take BloxSession instead of HttpSession and BloxRequest instead of HttpServletRequest. See the Blox API change list in the Javadoc documentation.
Chart legends: • Legend.setLegendItemStyle() • Legend.setLegendRegionStyle()	Use the following methods instead: • Legend.setTextStyle() • Legend.setRegionStyle()

## Deprecated fields

Deprecated Constants	New Constants
DataSourceSelectFormBlox: • IBMDB2JDBCdriver (Field Value: IBM DB2 JDBC Driver) • OracleType4Driver (Field Value: Oracle Type 4 Driver) • SybaseJConnectDriver (Field Value: Sybase JConnect Driver) • WebLogicMS_SQLServerDriver (Field Value: WebLogic MS-SQL Server Driver)	DataSourceSelectFormBlox: • DB2Driver (Field Value: IBM DB2 JDBC Driver) • OracleDriver (Field Value: Oracle Driver) • SybaseDriver (Field Value: Sybase SQL Server Driver) • MSSQLDriver (Field Value: Microsoft SQL Server Driver)
RepositoryBlox: TYPE_HASHTABLE	

## Deprecated constructors

The table below lists the constructors that are deprecated in this release.

Deprecated constructors	New constructors
All DateChooser constructors: • DateChooser() • DateChooser(BloxContext, Date, ICalendar, IDateFormat) • DateChooser(Date) • DateChooser(Date, ICalendar, IDateFormat, Locale) • DateChooser(Date, int) • DateChooser(ICalendar, IDateFormat, Locale) • DateChooser(int)	Use the new factory methods instead: • DateChooser.getInstance() • DateChooser.getInstanceWithContextLocale(Date, ICalendar, IDateFormat, BloxContext) • DateChooser.getInstanceWithDate(Date) • DateChooser.getInstanceWithDateLocale(Date, ICalendar, IDateFormat, Locale) • DateChooser.getInstanceWithDateStyle(Date, int) • DateChooser.getInstanceWithLocale(ICalendar, IDateFormat, Locale) • DateChooser.getInstanceWithStyle(int)
com.alphablox.blox.logic: BloxDestroyedListener(HttpSession, Blox, String)	Use BloxDestroyedListener(BloxSession, Blox, String)
com.alphablox.blox.uimodel: MemberFilterBrixModel(), MemberFilterBrixModel(String), MemberFilterBrixModel(String, Locale[])	Use MemberFilterBrixModel (Locale[])

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## Deprecated classes

The table below lists the class that is deprecated in this release.

Deprecated class	New class
ChartPageEvent in the com.alphablox.blox.filter package.	ChartPageListener in the com.alphablox.blox.event package.

---

## Deprecated interfaces

The table below lists the interface that is deprecated in this release.

Deprecated interface	New interface
ChartPageFilter in the com.alphablox.blox.filter package.	ChartPageListener in the com.alphablox.blox.event package.

---

## Chapter 8. Documentation

IBM may periodically make documentation fix packs and other documentation updates to the DB2 Alphablox documentation. If you access the DB2 Alphablox library at <http://www.ibm.com/software/data/db2/alphablox/library.html>, you will always be pointed to the most up-to-date information with additional links to technotes and white papers. The DB2 Alphablox information center on the IBM Web site at <http://publib.boulder.ibm.com/infocenter/ablxhelp/8.3/index.jsp> is updated more frequently than either the PDF or the hardcopy books.

### Flexible installation option

You can choose to view the DB2 Alphablox documentation using the option that best meets your needs:

- To ensure that your documentation is always up to date, access all of your documentation directly from the DB2 Alphablox Information Center hosted on the IBM Web site. By default, all links to the Information Center and to DB2 Alphablox Javadoc from the Admin Pages go to the IBM Web site for the latest, most up-to-date information.
- To keep your network traffic within your intranet, you can install the DB2 Alphablox documentation on a single server on your intranet. The DB2 Alphablox documentation installer offers two options:
  - The **Install under an existing DB2 Alphablox installation** option lets you install the documentation under an existing DB2 Alphablox installation. With this option, all links to the Information Center and to Javadoc from the DB2 Alphablox Admin Pages will be automatically modified to go to this locally installed version.
  - The **Install as a standalone Information Center** option lets you install the documentation anywhere without associating it with a DB2 Alphablox instance. This lets you conveniently access the documentation during application development on Windows systems. If you want the information center link from the DB2 Alphablox Admin Pages to go to this standalone installation, make sure the standalone information center is installed on a server on the intranet. You can then modify the link as described in “Installing as a standalone information center” on page 38.

**Note:** Information Center installed on your local system must be started first before you can access it. On Windows system, use the shortcuts created. On Linux and UNIX systems, run the `IC_start.sh` script. Both the shortcuts and the location where the files are installed are described in “Installing as a standalone information center” on page 38.

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### PDF documents

Information in the DB2 Alphablox Information Center is available as PDF files. Visit the DB2 Alphablox library page at <http://www.ibm.com/software/data/db2/alphablox/library.html> for links to the PDF files and the information center. The PDF documents are also located on the DB2 Alphablox CD under the `documentation/pdf` directory. They are organized into their appropriate language directories if a translated version is available. Check the English directory (the `en_US` folder) for the complete set.

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## Installing to an existing Alphablox installation

Choosing the "Install under an existing Alphablox installation" option when you run the documentation installer will ensure all links to the Information Center and to Javadoc from the DB2 Alphablox Admin Pages are automatically modified to go to the installed version.

*Table 1. Documentation installation location when documentation is installed under an existing Alphablox installation*

Component	Location	Entry page
Information Center	<alphablox_dir>/InfoCenter	ic.html  (To start the information center, run IC_start.bat or IC_start.sh)
DB2 Alphablox Blox API Javadoc	<alphablox_dir>/system/documentation/javadoc/blox	index.html
Blox API Change List	<alphablox_dir>/system/documentation/javadoc/blox	changes.html
FastForward API Javadoc	<alphablox_dir>/system/documentation/javadoc/fastforward	index.html
Relational Reporting API Javadoc	<alphablox_dir>/system/documentation/javadoc/report	index.html

If, for any reason, you need to switch back to the IBM hosted information center, or install the documentation on a separate system, see "Configuring the links to information center and Javadoc documentation" on page 39.

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## Installing as a standalone information center

Choosing the "Install as a standalone Information Center" option when you run the documentation installer will install the Information Center and the Javadoc to the directory you specify. This allows you to serve the documentation on a different system in your intranet or to more easily access the documentation on your own development system.

On Windows system, this will create an **IBM DB2 Alphablox Online Documentation** program group with the following shortcuts:

- **Documentation**
  - **Information Center**
  - **Start Information Center**
  - **Stop Information Center**
- **Javadoc**
  - **Blox API**
  - **Blox API Change List**
  - **FastForward API**
  - **Relational Reporting API**

**Note:** If you choose to install only a subset of the documentation or Javadoc, the shortcuts may be different.

**Note:** On Linux or UNIX systems, no shortcuts are created. See the following table for the location and entry page for each documentation component.

*Table 2. Documentation installation location for a standalone installation*

Component	Location	Entry page
Information Center	<alphablox_doc_install>	To start the information center, run IC_start.bat or IC_start.sh. See notes below for instructions on how to launch the information center.
DB2 Alphablox Blox API Javadoc	<alphablox_doc_install>/javadoc/blox	index.html
Blox API Change List	<alphablox_doc_install>/javadoc/blox	changes.html
FastForward API Javadoc	<alphablox_doc_install>/javadoc/fastforward	index.html
Relational Reporting API Javadoc	<alphablox_doc_install>/javadoc/report	index.html

**Note:** To launch the information center:

- In a browser window, go to `http://127.0.0.1:port_number/help/index.jsp`. The port number is specified during the installation. If you do not remember the port number, this information can be found by opening the IC\_start.bat or IC\_start.sh file in a text editor. The number after the -port option is the port number for the information center.
- On Windows system, you can also use the **Information Center** shortcut created under the **IBM DB2 Alphablox Online Documentation** program group.

If you need to configure your DB2 Alphablox instance to point to your standalone information center, see “Configuring the links to information center and Javadoc documentation.”

---

## Configuring the links to information center and Javadoc documentation

You can manually modify the following files in your DB2 Alphablox installation to point to where the documentation is installed. All these files are located under <alphablox\_dir>/system/documentation/.

*Table 3. Files to configure for custom links to documentation*

Link from the Admin Pages	Points to
DB2 Alphablox Information Center	ic.html
Blox API Javadoc	jdoc_blox.html

Table 3. Files to configure for custom links to documentation (continued)

Link from the Admin Pages	Points to
Blox API Change List Javadoc	jdoc_change.html
FastForward API Javadoc	jdoc_ffwd.html
Relational Reporting API Javadoc	jdoc_report.html

In the same directory there are two other versions for each of the entry page. One points to the IBM hosted version (\_hosted.html), and the other points to the locally installed version (\_local.html).

## Switching to the IBM hosted documentation

If you need to switch back to the IBM hosted information center and Javadoc, copy the hosted version of the entry page in the same directory over to the specified file and remove \_local from the file name, as shown in the following table.

Table 4. Files to use for IBM hosted documentation

Link from the Admin Pages	Copy this file	Over to
DB2 Alphablox Information Center	ic_hosted.html	ic.html
Blox API Javadoc documentation	jdoc_blox_hosted.html	jdoc_blox.html
Blox API Change List Javadoc documentation	jdoc_change_hosted.html	jdoc_change.html
FastForward API Javadoc documentation	jdoc_ffwd_hosted.html	jdoc_ffwd.html
Relational Reporting API Javadoc documentation	jdoc_report_hosted.html	jdoc_report.html

## Switching to the locally installed documentation

If you need to switch back to the documentation installed under an existing DB2 Alphablox installation, copy the \_local.html version of the entry page in the same directory over to the specified file and remove \_local from the file name, as shown in the following table.

Table 5. Files to use for documentation installed under an existing DB2 Alphablox installation

Link from the Admin Pages	Copy this file	Over to
DB2 Alphablox Information Center	ic_local.html	ic.html
Blox API Javadoc	jdoc_blox_local.html	jdoc_blox.html
Blox API Change List Javadoc documentation	jdoc_change_local.html	jdoc_change.html
FastForward API Javadoc documentation	jdoc_ffwd_local.html	jdoc_ffwd.html
Relational Reporting API Javadoc documentation	jdoc_report_local.html	jdoc_report.html

## Switching to a standalone information center

If you have DB2 Alphablox documentation installed on a separate server on the intranet and want to configure the link from DB2 Alphablox Admin Pages to point to this installation:

1. Copy `ic_hosted.html` over to `ic.html`.
2. Modify the URL value in page's `<meta>` tag for redirection:  
`<meta http-equiv="REFRESH" content="0; URL=http://server:port/help/index.jsp">`





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## Chapter 9. Accessibility

Accessibility features help users with physical disabilities, such as restricted mobility or limited vision, to use software products successfully. DB2 Alphablox has the following major accessibility features:

- Users can use keyboard shortcuts and accelerators to navigate and perform data analysis actions in Blox user interface.
- Blox user interface in the DHTML client can be rendered in a high contrast theme for users with limited vision.
- Blox user interface rendered using the high contrast theme honors the font size display preference set in the browser.
- User can use keyboard shortcuts to navigate and interact with relational reports created using ReportBlox.
- Administrative users can use keyboard shortcuts to navigate in the DB2 Alphablox Admin Pages to perform their administrative work.
- The DB2 Alphablox Information Center is in XHTML 1.0 format, which is supported by most browsers.
- The DB2 Alphablox Information Center and end user online help honor the font size display preference set in your browser.

**Important:** Accessibility is supported on Internet Explorer 6.0 only.

### Keyboard navigation

Users of your applications can navigate and interact with data in Blox user interface using only the keyboard. They can use keys or key combinations to perform operations that can also be done using a mouse. The keystrokes are generally consistent with the standard Windows keyboard shortcuts. Keyboard navigation is also supported for interactive reports built using ReportBlox. For more information, see “Keyboard shortcuts and accelerators for Blox user interface” on page 44 and “Keyboard shortcuts for ReportBlox user interface” on page 45.

### Accessible display

The DHTML client provides keyboard shortcuts for users to navigate and perform data analysis actions using Internet Explorer. For users with limited vision, the Blox user interface can be rendered in a provided high-contrast theme and the font size setting specified in the browser is respected. For users with limited vision, application developers can render applications using the high contrast theme (theme=highcontrast). This can be achieved with user profile, such as via a custom user property.

### Compatibility with assistive technologies

You can use screen readers and other assistive technologies to read data in the Blox user interface or in a relational report.

## Accessible documentation

DB2 Alphablox information center is provided in XHTML 1.0 format, which is supported in most Web browsers. XHTML allows you to view documentation according to the display preferences set in your browser. It also allows you to use screen readers and other assistive technologies.

## Limitations

Accessibility support in the Blox user interface has the following limitations:

- Keyboard shortcuts for navigating the Blox user interface are supported for Internet Explorer 6 browsers only.
- The chart component is not accessible using the keyboard. It is recommended that the chart component be removed from a PresentBlox (`chartAvailable = "false"`) or use only the grid component for users with disabilities.
- The toolbar component and the toolbar buttons on the toolbar are not accessible using the keyboard. It is recommended that the toolbar be hidden (`toolbarVisible="false"`) for users with disabilities. Because toolbar buttons are essentially shortcuts to a subset of the functionality available from the menu bar, no functionality is lost when you set the toolbar to be not visible.

See the topic on Designing an accessible application in the *Developer's Guide* for more information.

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## Keyboard shortcuts and accelerators for Blox user interface

The keystrokes used to navigate in Blox user interface and interact with data are generally consistent with the standard Windows keyboard shortcuts. Note the following:

- Keyboard shortcuts are supported for Internet Explorer browsers only.
- Keyboard shortcuts for navigating inside the Chart component are not supported.

The Blox user interface typically consists of some user interface components, such as the grid and the chart that present the data, and user controls, such as menu bars, drop-down lists, or buttons. User controls let you perform data analysis actions. Below are the common keyboard shortcuts for using the Blox user interface:

*Table 6. General keyboard shortcuts*

Action	Shortcut
To move to the next or previous set of user controls or component	Use Tab and Shift + Tab to move forward and backward.  For example, tabbing in a PresentBlox moves you from the menu bar to the page filter, to the data layout panel, and to the Grid.
To move to the next or previous item in a set of controls	Use the arrow keys to go among the individual menu items in a menu bar, data cells in a Grid, or radio buttons in a set.
To select or deselect a radio button or checkbox	Use the spacebar.

Table 6. General keyboard shortcuts (continued)

Action	Shortcut
To select and click a button	Use Tab and Shift + Tab to go to the next or previous button.  Press Enter to simulate clicking of the selected button.  Press Esc to cancel.
To execute the selected menu item or button (equivalent to clicking a button)	Use the Enter key or spacebar.
To select a menu item in an active menu using mnemonics	Press the letter underlined in the menu item to select it.
To go to the menu bar while inside a Blox	Press Ctrl + Alt + M.

Table 7. Navigation and data analysis in grid

Action	Shortcut
To navigate among data cells in grid	When you tab to the grid and the whole grid is selected, press the Down arrow key to enter into the data cells. Then you can use either the arrow keys or the Tab key to move around the cells.
To bring up the right-click menu in a data cell in the grid	Press Shift + F10.
To return focus back to the whole grid while in grid data cells	Press Esc.  The whole grid is now in focus. This allows you to tab to other controls or components.
To activate a drop down list such as in the page filter	Press ALT+ Down arrow key.
To go to the menu bar while inside a Blox	Press Ctrl + Alt + M.

Table 8. Tree menu navigation

Action	Shortcut
To navigate in a tree menu	Use the Up and Down arrows keys.
To expand a collapsed node in a tree	Press the Right arrow key.
To collapse an expanded node in a tree	Press the Left arrow key.

**Note:** When you use a screen reader program, the screen reader takes control over the keyboard, and the shortcuts described here may not apply.

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## Keyboard shortcuts for ReportBlox user interface

The keystrokes used to navigate in an interactive report built using ReportBlox are generally consistent with the standard Windows keyboard shortcuts. The following tables list the keyboard shortcuts for using the ReportBlox's interactive context menus and for styling a report using the Report Style Dialog.

*Table 9. General keyboard shortcuts for ReportBlox's interactive menus*

<b>Action</b>	<b>Shortcut</b>
To move to the next or previous group header, column header, or group total context menu	Use Tab and Shift + Tab.  The context menu automatically drops down as you tab to the hot spot.
To select a menu item	Use the arrow keys to move to the desired item and press Enter.

*Table 10. Keyboard shortcuts for the Report Style Dialog*

<b>Action</b>	<b>Shortcut</b>
To navigate among the controls	Use Tab and Shift + Tab to move forward and backward.
To activate a drop-down list	Use Alt + Down arrow key.  You can also use the Up and Down arrow key to scroll and make a selection without expanding the drop down list.
To select an item in a drop-down list	Use the Up and Down arrow keys to move to the desired item. Press Enter or Tab to set the selection and move to the next control.
To select or deselect a radio button or checkbox	Use the spacebar.
To apply the changes	Press Enter.
To cancel	Press Esc.

**Note:** Keyboard shortcuts are supported for Internet Explorer browsers only.

**Note:** When you use a screen reader program, the screen reader takes control over the keyboard, and the shortcuts described here may not apply.

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