# DB2 Alphablox for UNIX and Windows v5.6 What's New



Note: Before using this information and the product it supports, read the information in "Notices" on page 5.

#### First edition (August 2004)

This edition applies to version 5, release 6, of IBM DB2 Alphablox for UNIX and Windows V5.6 (product number 5724-J16) and to all subsequent releases and modifications until otherwise indicated in new editions.

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# **Contents**

## What's New

Notio	ces	5
	Trademarks	
What	t's New	9
	New Features and Enhancements	
New	in Alphablox Analytics 5.5	
	Chart Enhancements (DHTML)	
	Grid Enhancements (DHTML)	
	Drag-and-Drop DataLayout (DHTML)	
	New PDF Reporting (DHTML)	
	Relational Reporting Enhancements	
	Data Enhancements (DHTML and Java)	
	Installation Enhancements	
	Other Notable Changes	
New	in Alphablox 5.1	
	DHTML Client Enhancements	. 27
	Blox Enhancements	. 28
	New Platform Support	. 29
	License Manager	. 30
New	in Alphablox 5.0	. 31
	Powerful, New DHTML Client	. 31
	FastForward (self-service reporting application framework)	. 32
	CommentsBlox for Annotating Data and Applications	
	Calculation Engine Enhancements	
	Bookmarking Enhancements	. 33
	PDF Enhancements	. 33
	Enhanced Microsoft Analysis Services Support	. 34
	Enhanced Support for Large Production Environments	. 34
	Documentation	. 34

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# What's New

DB2 Alphablox v5.6 continues the DHTML Client performance enhancements in Alphablox Analytics 5.5 and adds additional platform supports:

- "Newly Supported Data Sources" on page 9
- "Newly Supported Server Configuration" on page 9
- "Newly Supported J2SE SDK" on page 10
- "Support for Logging" on page 10
- "Performance Enhancements" on page 10

## **New Features and Enhancements**

#### **Newly Supported Data Sources**

DB2 Alphablox v5.6 adds supports for the following data sources:

#### Multidimensional

- IBM DB2 OLAP Server v8.2
- Hyperion Essbase v7.1
- IBM DB2 OLAP Server Deployment Services v8.2
- Hyperion Essbase Deployment Services (EDS) v7.1
- IBM DB2 OLAP Integration Server v8.2
- Hyperion Essbase Integration Services (EIS) v7.1
- IBM DB2 OLAP Server v8.2 and Hyperion Essbase v7.1 Hybrid Analysis

#### Relational

Oracle 10g

## **Newly Supported Server Configuration**

IBM AIX 5L 5.2 support is added.

#### **Newly Supported J2SE SDK**

DB2 Alphablox v5.6 now supports J2SE SDK 1.4.

#### **Support for Logging**

You can now send messages or exceptions to the DB2 Alphablox log in the repository. This can be a very useful application development and debugging tool in addition to logging data of interest for the purposes of monitoring. Through the AdminBlox's getlog() method, you can easily access the Log object. See the AdminBlox reference section in the *Developer's Reference for the DHTML Client*.

#### **Performance Enhancements**

DB2 Alphablox v5.6 continues the DHTML Client performance enhancements in Alphablox Analytics 5.5. In particular, the load and display time for GridBlox that contains large number of columns is further improved, the processing of list components in the Blox UI model is more efficient, and the undo/redo history list under the Navigation Toolbar is now more performant.

# New in Alphablox Analytics 5.5

Alphablox Analytics 5.5 continues the DHTML client innovation introduced in Alphablox 5, offering new functionality, enhancements, and bug fixes. Also, PDF printing for the DHTML client is significantly enhanced. Access to relational data has been improved with many ReportBlox enhancements.

New features and enhancements in DB2 Alphablox 5.6, detailed in the following pages, include:

- Chart Enhancements (DHTML)
- Grid Enhancements (DHTML)
- Drag-and-Drop DataLayout (DHTML)
- Data Enhancements (DHTML and Java)
- New PDF Reporting (DHTML)
- Relational Reporting Enhancements
- Installation Enhancements
- Other Notable Changes

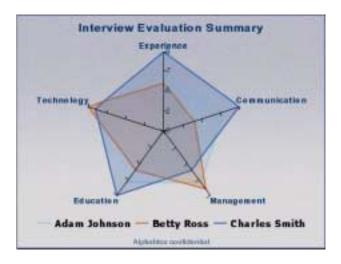
## **Chart Enhancements (DHTML)**

## New chart types

#### Radar

Radar charts (also known as spider graphs or spider web charts) are used to evaluate multiple alternatives against several different factors. Radar charts are often used in marketing, human resources, and education.

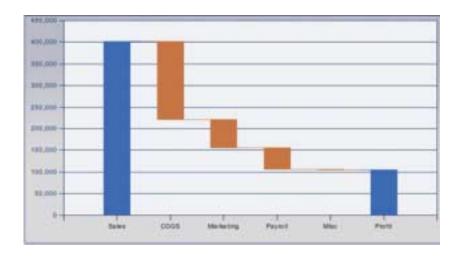
The following is an example of a radar chart:



#### Waterfall

Waterfall charts show components of a total, with positive and negative values in different colors. Waterfall charts are used in specialized applications, such as price analysis in manufacturing.

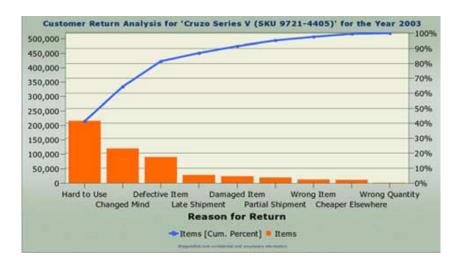
The following is an example of a waterfall chart:



#### **Pareto**

In Pareto charts, a line shows the running total as a percentage. When this line begins leveling out, that's considered the cut off for the subset. Pareto charts are used to identify the small subset of biggest contributors (80/20 analysis) and where to focus efforts.

Following is an example of a Pareto chart:



## Trendline support

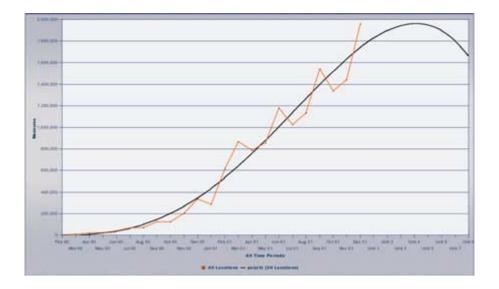
Trendlines provide "predictive analytics" and are often used in forecasting and planning applications.

Six types of trend lines are supported:

- linear
- polynomial (up to 4th order)
- exponential
- power
- logarithmic
- · moving average

To use trend lines, right-click on a data point, then select Advanced > Add Trendline to define a new trendline.

Following is an example of a trendline chart:



## Tags for Dial charts

Custom JSP tags make it easier for application developers to add and configure dial charts.

## User interface for chart layout and formatting

Users can right-click on charts to modify the following chart properties using context-sensitive menus and dialogs:

- legend: position, color, and font
- data series: color, line width, 3-D effect, label, marker shapes and sizes
- axis: title text, title fonts and colors, label colors and fonts, and grid lines visibility
- title: fonts and color
- · footnote: fonts and color
- y-axis: scaling, format masks
- x-axis: label orientations, including custom angles

After users have made the desired changes, they can use bookmarks to save the views for later use.

#### New format masks

Charts can now support format masks for thousands (K) and millions (M).

## **Grid Enhancements (DHTML)**

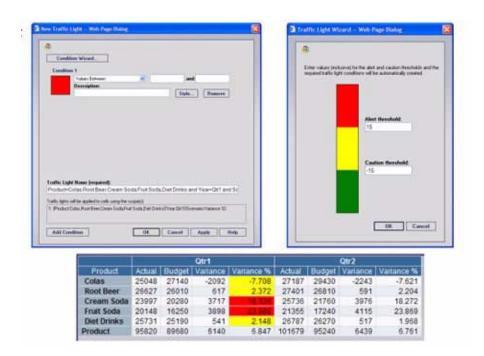
#### User interface for setting grid number format masks

Users can select row or column headers, or data cells, then right-click and select Advanced > Format mask to apply format masks to the selected data cells.

## User interface for traffic lights

Users can select row or column headers, or data cells, then right-click and select Advanced > Traffic Lights to apply their own custom traffic lighting (also known as exception reporting).

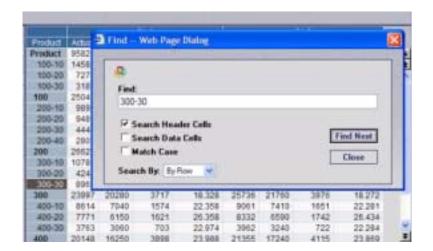
The screenshots below show two traffic lighting dialogs for users and an example of the resulting "traffic lights" in a grid:



## Find members or data in grids

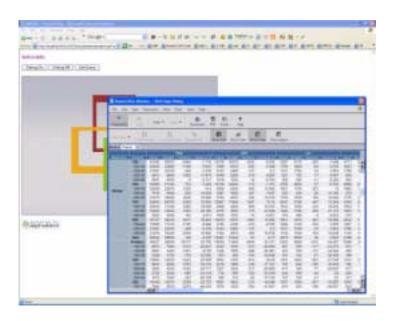
Users can now search for members and data in a grid resultset by clicking on Edit > Find in the menubar. The member or data found will be highlighted and, if the result is not visible, the grid will automatically scroll to it. Wildcard characters, including? and \*, are also supported.

The following screenshot shows the Find dialog:



## **Popout button**

Users can press the new Popout button on Blox toolbars to pop out Blox into a separate, larger window.



#### Top N, bottom N, and percent of total enhancements

When developers add the <blown:topN>, <blown:bottomN>, and <blown:percentOfTotal> tags to a GridBlox or PresentBlox, users can right-click on the grid, then select Advanced to access the choices for Top N, Bottom N, and Percent of Totals. Added to the options available, users can now choose four new options:

- Leaf-level members or currently displayed members
- Preserve Hierarchy
- Hide Other Rows and Columns
- Show Other (summary)

#### Other notable enhancements

Along with the grid enhancements described above, here are some other changes you may notice:

#### Charting only a subset of the grid

When using a PresentBlox, users can select a portion of grid to be displayed in the chart panel by selecting Chart > Selected Data Only in the menubar.

#### Tab key support

Users can tab within cells on a grid by pressing the Tab key.

#### **Grid Select All**

In the menubar, users can select Edit > Select All to highlight and select all cells in a grid resultset, including row and column headers and data cells, whether visible or not.

#### New SpinnerButton control

A new Blox UI component is available for enhancing analytic applications.

Here is an example using a spinner control to set custom angles on chart labels:



#### Improved performance

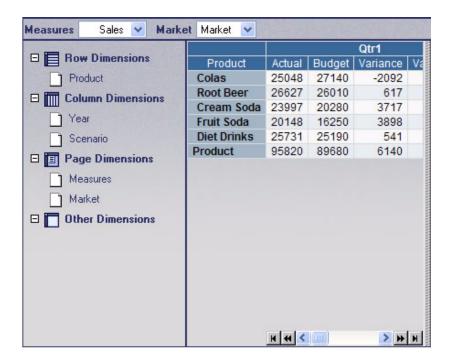
Overall performance has been improved, including the following:

- Faster scrolling
- Improved Member Filter speed
- Batched dialog events

## Drag-and-Drop DataLayout (DHTML)

A new DataLayoutBlox attribute, interfaceType, allows developers to change the default (droplist) data layout to a dimension tree, with draggable members.

With the tree view, users can drag dimensions between axes (Row, Column, Page, and Other). Dimensions can also be dragged up and down within axes. Right-clicking will give access to the Member Filter dialog.



## New PDF Reporting (DHTML)

## **Better rendering**

The new PDF views use the Blox UI Model to replicate the following DHTML settings:

- Colors
- Fonts (size and style)
- Format masks (\$, %, etc.)
- Cell alerts
- Borders
- Images inside cells

Also, the application default theme can be overridden by end user in the PDF dialog.

#### **Performance improvements**

Blox views are converted to PDF files up to four times faster than in the previous implementation.

## Remote print processor

PDF files can be generated on a remote server and controlled using the DB2 Alphablox Admin Pages.

## Multiple Blox on a single PDF report

By adding a button to a web page with multiple Blox on it, you can now offer the option of displaying all of the specified Blox in a single PDF file.

## Improved customization experience

Instead of having to master XSLT and XSL-FO, developers can now more easily customize PDF files to meet user needs. Here are a few of the changes you'll discover:

- JSP tags and Java APIs instead of XSLT
- Tag attributes for margins, page size, headers, and footers
- Custom text fields can be easily added to the user dialog using new tags and attributes.

## **Relational Reporting Enhancements**

#### **Embedding HTML**

Custom HTML can now be added into a rendered report. You can embed HTML content in any part of a report (links on data values, JavaScript calls on column headers, etc.).

#### Improved row banding and data alignment

Row banding and data alignment are now more robust and should resolve issues you may have encountered in previous releases.

## Ability to sort by multiple columns (API only)

Using the ReportBlox API, developers can now programmatically sort multiple columns.

#### Javadoc documentation

Javadoc documentation now exposes interfaces for the ReportBlox pipeline model.

## Added bloxName to ReportBlox components

Like other Blox components, ReportBlox components can now support the bloxName attribute, enabling easier reuse of objects on the server.

## **New TextBlox component**

The new TextBlox component allows developers to more easily format report areas, including group headers, group footers, group totals, column headers, and data. Also, you can now access other column values and parent group members.

## Improved exception reporting

The ErrorBlox component now exposes the root cause in an exception, which was previously unavailable for exceptions occurring in nested components.

## New two-pass calculation functions

Four new calculation functions have been added:

- Ranking
- Percent of Total

- Running Total
- Running Count

## Data Enhancements (DHTML and Java)

## Merged headers dialog

Users can combine two dimensions into one by using the merged headers dialogs, available from the menubar by selecting Data > Advanced > Merged headers. Member names can also be renamed based on patterns.

Below are before (left) and after (right) views of a grid, showing how merged headers more effectively use space. Note:





## IBM DB2 OLAP Server and Hyperion Essbase EIS drillthrough

Using the new Essbase EIS DrillThrough support (for EIS 6.5.3), users can drill from summarized Essbase data into detailed relational data. Users can choose from a predefined list of EIS drillthrough reports with the results displayed in ReportBlox views.

EIS drillthrough is simple to configure, enable, and customize.

#### Calculated member enhancements

Calculated members can now be drilled into, are displayed in the Member Filter (or Dimension Explorer) dialog,

Also, three new calculation types have been added:

Power

- Find
- LookupCount

## **Sorting enhancements**

When sorting a member, you can now optionally preserve the hierarchy. The user dialog has been enhanced with a check box for preserving hierarchy.

## **Installation Enhancements**

The DB2 Alphablox installer has been enhanced to offer the following four different installation set options:

Installation Set	Description
Compact	Minimal installation of DB2 Alphablox. Includes tools, utilities, and help (end user/admin).
Typical	Compact, plus applications (FastForward, Examples, and Query Builder). Includes documentation for installation, administration, and development (Javadoc, DHTML Client, and Relational Reporting). This is the default installation set.
Complete	Typical, plus fonts for PDF (Japanese and Korean) and developer documentation for Java client and SpreadsheetBlox.
Custom	Choose this option to customize the features to be installed.

## Other Notable Changes

## **Admin Pages Enhancements**

Test data source button added to data source definitions page.

## **Bug fixes**

As usual, important bug fixes help increase the robustness and quality of DB2 Alphablox.

# New in Alphablox 5.1

Building on the success of the Alphablox 5 release, Alphablox 5.1 adds a number of significant enhancements described below. For details about features added in the Alphablox 5.0 release, see "New in Alphablox 5.0" on page 31

## **DHTML Client Enhancements**

Alphablox 5.1 continues improvements in the DHTML client, with enhancements in grid behavior and charting. Also, support has been added for Microsoft Internet Explorer 5.5 and later.

#### Grids

#### Scrolling improvements

- Significantly faster scrolling
- Pixel-based scrolling
- Row and column header scrolling (optional)
- Scrolling to height and width of the grid without blank areas appearing
- Fixed row and column headers on bottom and right
- Significantly fewer server requests

#### Keyboard support

Arrow keys and other navigation keys can be used to more easily move around in grids.

#### Charts

#### **Combination charts**

The DHTML client can now display combination charts, which include multiple combinations of lines, bars, and areas.

#### **Browsers**

The DHTML client is now supported in Microsoft Internet Explorer 5.5 and later.

## **Blox Enhancements**

A summary of Blox enhancements follows here. Details about these enhancements, including syntax and usage, can be found in the *Developer's Reference for the DHTML Client* and the *Developer's Reference for the Java Client*.

#### MemberFilterBlox (DHTML)

A new DHTML-only Blox, MemberFilterBlox, has been added to allow you to present a Member Filter dialog for users to select members. Using the MemberFilterBlox, you can specify a DataBlox to use, then place a Member Filter dialog on a page to allow users to select members from either all available dimensions or only specified dimensions.

#### CommentsBlox Enhancements (DHTML and Java)

The ability to annotate data cells and applications has been enhanced with the following additions:

- Ability to add and delete fields from a collection after they are created. This
  is done through the Comments Management dialog in the Alphablox Admin
  Pages or using the CommentsBlox API.
- Ability to add and delete dimensions from collection after they are created, if
  no comments exist. If comments already exist, this operation will fail with
  an error message.
  - Administrators can now completely change the dimensions for a collection (previously, you could only add or delete individual dimensions).
  - API changes: A new new method, replaceDimension(), has been added to support this capability on the CommentsBlox. Use replaceDimension() to reset the dimension list after the collection is created. Use setDimension() when creating the collection. When using replaceDimension(), if comments exist in the collection, a CommentsBloxException will be thrown.
- Sorting: You can now sort by author, comment text, or date through the user interface.
  - Sort can be ascending or descending. The UI metaphor is the same as the metaphor for sorting email messages simply click on the header for the column you wish to sort. An indicator has been added to indicate which column is being used for sorting and whether it is ascending or descending. Also, when you sort using the UI, the sort is applied at the CommentsBlox level, meaning it persists during a user session (that is,

- after a sort has been performed in the user interface, the sort will persist even if the UI is closed and reopened).
- Sorting APIs: Using the CommentsBlox API, you can now sort on any field in the collection and the sort will be reflected in the user interface. Java APIs and JSP tags are provided. The structure of the API is allows you to create a comments comparator (CommentComparator) and set the comparator in the CommentsBlox. When setting the comparator, you specify the field on which you wish to sort and the order. JSP tag support allows assemblers to provide the individual field and sort order:
- Exposing the address API: The address of a CommentSet is now accessible.
   The CommentSet API provides a getAddress() method that returns a CommentSetAddress object.
- Showing the address of a comment in the UI: The address of a comment now appears in the out-of-the-box UI when you right-click on a cell.
- Support for cell value: When it might be useful, administrators can now add CellValue as a field in their collections. When added, the cell value will appear as a read-only value when displaying a cell-level comment.

#### DataBlox Enhancements (DHTML and Java)

A new DataBlox property, mergedHeaders, allows you to merge multiple row or column headers from different dimensions into single, more compact headers allowing for better management of grid displays.

## **New Platform Support**

In this release, Alphablox extends the platform support for application servers, web browsers, and data sources. For details on server requirements, installation, and configuration, see the *Installation Guide*.

## **Application Servers**

Support for the following application servers and server configurations has been added:

- IBM WebSphere 5
- BEA WebLogic 8.1
- Vertical cluster support for BEA WebLogic

#### Web Browsers

Support for the following web browsers has been added:

- Microsoft Internet Explorer 5.5 for the DHTML client only
- Netscape 7.x/Mozilla 1.4 and later (using the Sun Java Plug-in) for the Java client only. For guidelines on building Alphablox applications that will work with these browsers, see chapter 3, Your Development Environment, in the *Developer's Guide for the Java Client*.

#### **Data Sources**

Support for the following additional data sources has been added:

- Hyperion Essbase 6.5.4
- Hyperion Essbase Hybrid Analysis

## License Manager

The new License Manager helps you comply with your Alphablox license by monitoring any constraints specified in your license and logging any violations that occur. Information generated by the use of your license is maintained only on your server:

- no information is sent back to Alphablox
- violations will not prevent users from using applications
- users will not see any violation messages

Starting with this release, a license key must be used to install or upgrade Alphablox Analysis Server. Reinstalling the same version will not require the license installation key.

Online help for the License Manager can be found by clicking on the Administration tab in the Alphablox Admin Pages, then clicking the License link under Runtime Management.

If you need to obtain a copy of a license, Alphablox Technical Support maintains copies of all issued licenses.

# New in Alphablox 5.0

Alphablox 5 provides even more power and ease of assembly to build rich, customized analytic applications, including:

- Powerful, New DHTML Client
- FastForward (self-service reporting application framework)
- CommentsBlox for Annotating Data and Applications
- Calculation Engine Enhancements
- Bookmarking Enhancements
- PDF Enhancements
- Enhanced Microsoft Analysis Services Support
- Enhanced Support for Large Production Environments
- Documentation

## Powerful, New DHTML Client

Alphablox 5 introduces a new DHTML client, based on a new Blox UI model. Capabilities and components of the DHTML client include:

- [5.1] Works with Microsoft Internet Explorer 5.5 and later [Alphablox 5.0 only supported MSIE 6 and later]
- [5.1] Grid scrolling and performance enhancements
- Analysis tools (Top N, Percentage of Total)
- Flexible grid formatting and layouts (including butterfly reports)
- Compress Headers (multiple column headers into one)
- More navigational components (undo/redo, data navigation button)
- Toolbars and menubar: appearing by default on the PresentBlox, ChartBlox, and GridBlox are now two toolbars and a menubar. These toolbars can be customized, or additional custom toolbars can be added.

- Theme-based client: supports two CSS themes, coleman and financial.
   Themes are easy to customize and new themes can be added.
- Powerful, server-based UI Model allows for easy customization to meet the unique needs of your users
- Calculation editor available on toolbar
- Create custom UI extensions using over 15 new UI components, including trees, buttons, charts, grids, selection lists, splitter windows, toolbars, and more.
- New intelligent components which can be used to dynamically build queries
  and generate data-driven interfaces for time periods, dimensions, members,
  and data sources. These components include TimePeriodSelectFormBlox,
  DataSourceSelectFormBlox, MemberSelectFormBlox.
- Blox Sampler DHTML application includes examples of using the DHTML client to customize the user interface.

For details on the DHTML client and it extensibility, see the *Developer's Reference for the DHTML Client* and the *Developer's Guide for the the DHTML Client*.

## FastForward (self-service reporting application framework)

FastForward, the new self-service reporting application framework, empowers end users to create their own application views. Features include:

- Easy configuration does not require Java programming skills.
- Report templates allow application administrators (typically OLAP administrators) to rapidly create custom reports for end users. New report templates can be added by JSP developers.
- Modern navigation system allows grouping and selecting reports.
- Built-in administrator interface for creating end user reports based on report templates.
- Self-service interface lets end users view published reports and save modified versions for personal use or for sharing with others.

## **CommentsBlox for Annotating Data and Applications**

Add comments to your existing or new applications using CommentsBlox. The new commentary capability features include:

• Easy access "out of the box"

- Easy integration with existing or new applications
- Ability to add end-user comments attached to individual data cells or on application pages
- Integrated cell comment indicators in the UI
- UIs for adding, displaying and administering comments
- APIs for extensibility

For details on the use of CommentsBlox, see the Developer's References and Developer's Guides for either the Java/HTML client or the DHTML client.

## **Calculation Engine Enhancements**

The calculation engine has more power in creating and analyzing calculated members. A new calculation user interfacce is also available. New calculation engine features include:

- New functions supported, including sum, count, average, median, standard deviation, max, min, product, variance, absolute, square root and round
- Ability to create custom functions
- Sort calculated members
- Two pass calculations, including Rank, Percent of Total
- Usability improvements for asymmetric reports, including hiding based on member or column/row combination

## **Bookmarking Enhancements**

New bookmark capabilities supported using BookmarksBlox, including:

- Query failure detection allows developers control to repair queries that failed due to outline changes
- Bookmark templates saves bookmark property settings without a query
- Ability to set query to text allows for dynamic bookmarks to be saved that use functions like "children" instead of precise member names

For more information on BookmarksBlox, see the Developer's References and Developer's Guides for the Java/HTML client or the DHTML client.

## **PDF Enhancements**

The Convert to PDF enhancements include:

- Better out-of-the-box PDF generation, including fit to page.
- Alleviate performance issues
  - Make it possible to run FOP on a different server -- this should help alleviate memory limitations as well.

## **Enhanced Microsoft Analysis Services Support**

- Support for native MDX Drillthrough command
- API support for member properties, allowing users access to more detailed, context information about members
- Multiple hierarchy UI support allows users to choose the hierarchy they want to use

## **Enhanced Support for Large Production Environments**

Additional capabilities for large production environments include:

- IBM WebSphere and BEA WebLogic clustering support
- Essbase Enterprise Services (EES 6.5) support
- Relational connection pooling support for IBM WebSphere and BEA WebLogic
- Improved integration with security packages the user manager is more extensible and provides easier integration with LDAP.

## **Documentation**

New and significantly enhanced online and printed documentation includes:

- Developer's Reference for the DHTML Client
- Developer's Guide for the DHTML Client