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What's New in QlikView 9

The QlikView development team has once again listened to the ideas and suggestions of users, customers and partners. Together, your feedback and our development efforts have resulted in QlikView 9, with more than 100 new features and enhancements.

We believe QlikView 9 has benefits for everyone. The majority of new features and enhancements are detailed below.

1.1 Licensing

Test Server license

A special license type has been created for use with QlikView Server (QVS) for test purposes. A QVS running with this license will have the full feature set and performance, but the word “Test” will be superimposed on all charts and added to all object captions. *See the QlikView Server Reference Manual for more information.*

QVS migration mode

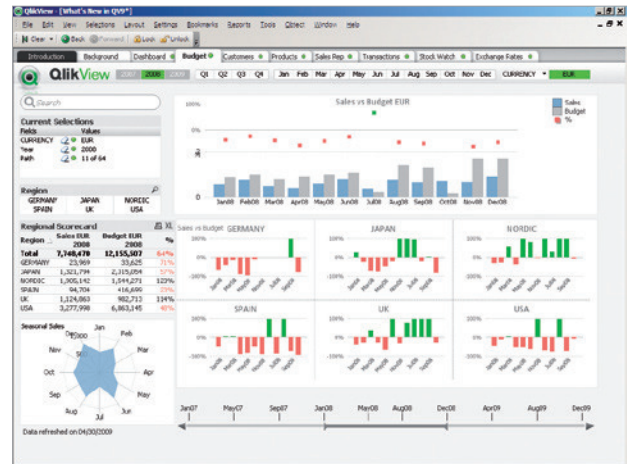
A setting has been added in the QVS Management Console allowing you to temporarily run two clusters of QVSs, sharing the same license during migration between versions. *See the QlikView Server Reference Manual for more information.*

QlikView Personal Edition

With QlikView 9, everyone is free to create QlikView documents for personal use. Hence, a normal QlikView desktop can be run without purchasing a license. There are no limitations, except that it is not possible to open QlikView documents created by other users. Nor is it possible to import an entire layout from an xml file.

Technically, every QlikView document is now saved with a user key – information tied to the user and the computer. A QlikView Server or a user of a full edition QlikView (a purchased license) can open any file, but a user of QlikView Personal Edition can only open files with the correct user key.

Should you change computers, you will not be able to open your old documents with QlikView Personal Edition. However, you will be asked to recover your files instead. The difference is that a new user key is generated and used



QlikView Personal Edition

for subsequent files. QlikView will accept four (4) user key changes.

Integration of Developer, Professional and Analyzer

With the introduction of QlikView Personal Edition, the difference between Developer, Professional and stand-alone Analyzer is no longer relevant and the three levels have been removed. Everyone has the right to run a QlikView with developer capability.

However, the functionality of corporate users can still be limited through deployment options stored in the registry.

Evaluation

The 15-day evaluation of QlikView Developer has been removed. It has been replaced by the QlikView Personal Edition which has no evaluation time limit.

License lease from QlikView Server

The standard way to distribute a QlikView User license is to use a Named CAL on a server. The client will then get a license lease from the server, valid for 30 days and enabling all functionality of the QlikView Desktop.

1.2 Server and document administration

QlikView Server with integrated reload

QlikView Server now comes with integrated reload scheduling capabilities. The product previously known as Publisher Standard Edition has been discontinued, while the capabilities it offered are part of the standard QlikView Server install package. *See the QlikView Server Reference Manual for more information.*

QlikView Publisher improvements

The product previously known as QlikView Publisher Enterprise Edition is now an add-on license component to QlikView Server.

The Publisher module has been optimized for more efficient utilization of multiple execution instances.

QlikView Management Console (QMC)

The new integrated QlikView Management Console is the result of customer feedback and major usability studies. Completely built around modern AJAX technology, it will run in any browser and without reliance on IIS or other platforms. We have strived to reduce the number of available settings to those most commonly used by customers, thereby producing a cleaner, more intuitive interface.

Even without the Publisher module, the QMC will feature a page for basic reload scheduling. If the Publisher module is installed, this will be expanded to a wizard-style interface for setting up more advanced Publisher tasks.

The QMC handles only one instance of QlikView Server and one execution instance of the Publisher. *See the QlikView Server Reference Manual for more information.*

QlikView Enterprise Management Console (QEMC)

The QEMC gives you full access to all possible settings for QlikView Server and the Publisher module. It also lets you control multiple instances of QlikView Server and multiple Publisher execution instances from a single management console, by means of an integrated tree-control.

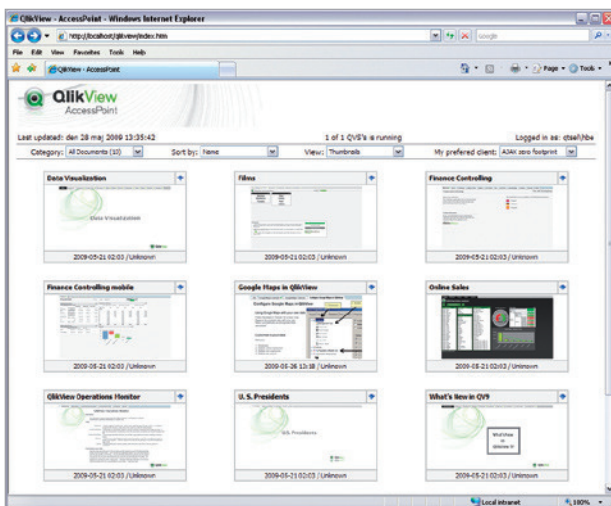
As with the QMC, the QEMC is built around AJAX technology and will run in any browser. Extensive usability studies have also been done prior to implementation. *See the QlikView Server Reference Manual for more information.*

Document default scheduling for reload

When designing a QlikView document, it is now possible to define a default reload schedule in the Document Properties dialog (see page 36 in Book II). This can, in many cases, reduce the administrative overhead of setting up a reload task when adding new documents to the server. From the QMC or QEMC, you may accept a proposed schedule with a single click.

QlikView Server SNMP support

QlikView Server is now enabled for monitoring from third-party software via the SNMP protocol. *See the QlikView Server Reference Manual for more information.*



New AccessPoint

1.3 AccessPoint

New QlikView AccessPoint

The all new QlikView AccessPoint has been designed as the principal interface where all users should find and open their QlikView documents.

QlikView 9 has the ability to bundle essential document metadata including active sheet thumbnails (optional) so QlikView AccessPoint can use it for presentation of the documents. The resulting GUI is less technical than its QlikView 8 counterpart and more usable.

Improved load balancing support

QlikView AccessPoint now has the ability to sense current load on several connected QlikView Servers and direct the user to the most appropriate server instance.

1.4 Collaboration

Full collaboration support in thin clients

The possibilities to create and share user sheet objects have been extended to AJAX and Java clients. The new functionality includes the possibility to access sheet object properties.

User sheets

In addition to user sheet objects there, is now also the possibility to create user sheets. *Read more on page 66.*

Granular sharing

Previously, sharing a user object always meant making it available to all other users of the document on a server. With QlikView 9, it also becomes possible to share to a selected list of users. *Read more on page 247 in Book II.*

Collaboration object undo/redo

The layout undo/redo function has been extended to user objects.

Updated collaboration pane

The collaboration pane has been updated to cater for the new possibilities listed above. *Read more on page 247 in Book II.*

1.5 Performance and scalability

Removal of 2 billion records limit

The hard limit of 2 billion records in a table has been removed. The amount of data that can be handled in QlikView 9 is only limited by available RAM and CPU power.

Selection and calculation performance

Major optimizations have been made in the areas of field frequency calculations, show alternatives and for common chart aggregation operations.

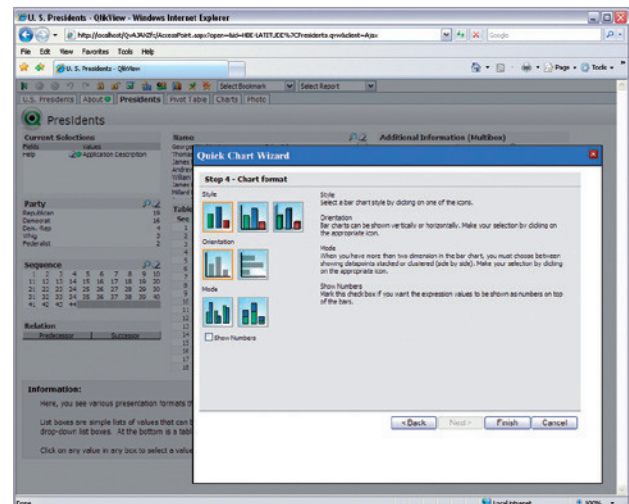
RAM utilization performance

Storage and caching algorithms have been optimized to use available RAM more efficiently in QlikView Server.

1.6 Real-time data update

Dynamic Data Update

For the first time in QlikView history, it is possible to programmatically update field data in real-time without running the script. Via new APIs and more or less standard



User object creation from AJAX

SQL insert, update and delete commands, any QlikView field data can be updated directly in RAM. On a server the updated data is pushed out to the clients.

This functionality is freely available in stand-alone QlikView but requires an additional license on QlikView Server. See the QlikView API Guide for more information.

1.7 Integrated reporting

Report distribution from QlikView Publisher

QlikView Publisher can now be used for setting up tasks mailing PDF documents with predefined QlikView reports.

Report printing from AJAX and Java clients

QlikView reports can now be printed from both the Java and the AJAX clients.

1.8 Script features

New table file wizard

The table file wizard has been completely revised for improved usability and function. *See page 247 for more information.*

Improved select statement wizard

The select statement wizard now supports the generation of multiple select statements. *See page 235 for more information.*

Load from field

The load statement may now use a previously loaded QlikView field as data source. This feature can be quite useful when reading data from web pages. *Read more on page 313 and on page 248.*

New script functions

The new Attribute function allows you to extract file attributes, such as id3-tags from mp3 files and exif tags from jpg files. The function currently supports attribute extraction from mp3, wma, wmv and jpg files. *See page 425.*

The new GetFolderPath function can be used to extract the path to a wide range of Windows standard folders, e.g. My Documents etc. *See page 427.*

Store into text file

The store into statement has been amended to allow output to text files with a delimiter of your choice. *Read more on page 340 for more information.*

New option for log files

An option has been added allowing you to retain multiple versions of script log files, each named with a time stamp. *Read more on page 19 in Book II.*

Export/import documents as xml

The possibility to export and import qvw documents, sheets and reports (excluding data) as xml has been added. This feature may be used for facilitating use of third party version control software with qvw files, eliminating the need to check in very large data sets. *See page 61 and page 167 for more information.*

Preview in table viewer

It is now possible to see a sample of table data by right-clicking on a table in the table viewer. *Read more on page 232.*

Relative change in input fields

The input syntax in input field cells has been extended, so that you can easily express relative changes and changes in percents. *Read more on page 215.*

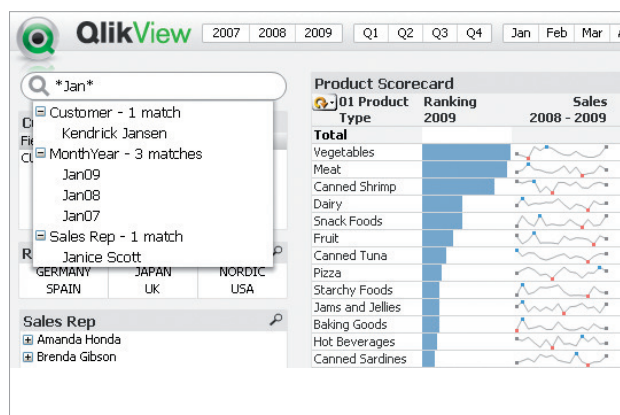
Document chaining

A new action (*see page 199 in Book II*) has been added making it possible to open a new document from inside another document and apply current selections from the old document to the new document. This feature of course works both in stand-alone operation as when working from a QlikView Server.

1.9 General features

Clear button

The function of the Clear button has been improved. As default, the Clear button will work just the way it always has. However, you may at any time set any selection state as start state and use this as Clear. On a server deployment, it is also possible for client users to set their own override Clear State. *See page 80 for more information.*



Search object

1.10 Layout features

Actions

Action is a new entity in QlikView 9. It is derived from the old button shortcuts, which they also replace. Apart from offering a much wider range of operations than the old shortcuts (including most common operations on sheets, sheet objects, fields and variables), you may also define a series of operations within a single action.

The introduction of actions should greatly reduce the need for macros, which is ideal since macros are never efficient from a performance point of view. *See page 196 for more information in Book II.*

Gauge, text object and line/arrow actions

The new actions can not only be used on buttons. Also text objects, line/arrow objects and gauge charts can be given actions, which are executed when clicking on the sheet object in question.

Trigger actions

The trigger macros of previous versions of QlikView have been replaced by trigger actions (see "actions" above). This gives you the possibility to build elaborate triggers without the use of macros.

Trigger macros from previous versions will be automatically translated to a RunMacro action when loaded into QlikView 9. *Read more about Triggers on page 44 and page 85 in Book II.*

Search Object

With the new search object you can search simultaneously in multiple fields (or even all fields in the document). Results are dynamically presented, as you type, in a tree-view list field by field. Selections can then be made in the usual manner. *See page 237 in Book II.*

Search Substring Highlight

The search result from a text search in list boxes or search objects are now displayed with the match of the search substring highlighted in the result list.

Tree-view list box

The logical extension of the hierarchy resolution script syntax introduced in QlikView 8.5. When displaying a field containing hierarchic data in a list box set to this mode, you get a full tree-view structure, where you can expand, collapse and make selections in either nodes or leaves. *See page 100 in Book II.*

1.11 Chart features

Indirect set analysis

Set analysis in QlikView 8.5, although very powerful, was restricted to stating direct selections in a field. With the new extensions in QlikView 9 it also becomes possible to state selections in a field based on selections in another field. You may express selections such as “Select all possible values in Customers based on a Sales last year”. *See page 353 in Book III for more information.*

Mini Charts

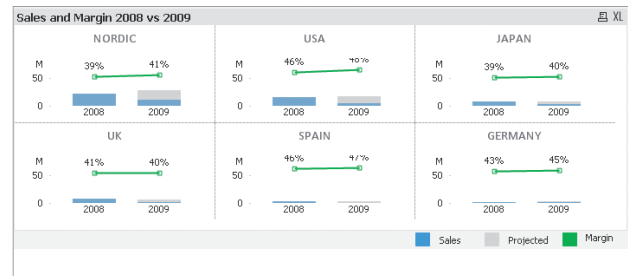
Mini charts are small line/bar charts inside a table cell. You specify an extra dimension, separate from the main chart dimensions, over which the expression is aggregated and plotted as a miniature chart. *Read more on page 238 in Book III.*

Trellis charts

Trellis chart means using the first dimension of a chart as iteration dimension for producing an array of charts. Any type of bitmap chart can be made into a trellis display. *Read more on page 38 in Book III.*

Dynamic chart backgrounds

The background of a chart can now be dynamically calcu-



Trellis Chart

Region	Sales EUR Ranking 2009	Sales EUR 2008	% Sales Trends 2008 - 2009	Budget EUR 2009	Budget EUR 2009	% Sales vs Budget 2009
Total	21,421,961	58,279,041	37%	66,043,534	32%	
NORDIC	10,237,751	22,633,998	45%	25,394,817	40%	
USA	5,211,323	16,394,030	32%	18,965,175	28%	
JAPAN	2,390,335	7,386,439	32%	8,900,320	27%	
UK	1,925,049	7,404,419	26%	6,630,265	29%	
GERMANY	934,179	2,100,962	44%	2,759,447	34%	
SPAIN	723,323	2,359,194	31%	3,453,510	21%	

Spark line mini chart

lated. This opens up possibilities. for map backgrounds that update with selections. *Read more on page 70 in Book III.*

Show condition on straight table columns

Instead of just having fixed hide or show status, you may now specify a dynamically calculated show condition for straight table columns. *Read more on page 243 in Book III.*

Clickable URL links in table cells

A new representation mode ‘link’ lets you transform expression cells in straight and pivot tables into clickable links. The normal selection on click behavior is disabled in such cells. It is possible to specify a display text and a URL for the link in the chart expression. The display text will appear underlined, to indicate link status. *Read more on page 215 in Book III.*

Box plot wizard

A new wizard has been added to facilitate the creation of box plot charts. *Learn more about the wizard on page 261 in Book III.*

Upgraded defaults and themes

QlikView 9 includes several improvements in terms of defaults for new objects and upgraded design themes.

1.12 AJAX client capabilities

Pre-generation of AJAX pages no longer needed

The need to pre-generate AJAX pages for QlikView Server



QlikView for iPhone

has disappeared. QlikView Server will display documents in AJAX when called upon, just like it has always done with the Java and plug-in clients. This takes away most of the migration worries between versions, which have so far been a potential problem for QlikView AJAX deployments.

Collaboration objects

The AJAX client now has full support for all types of user objects and shared objects. The new user sheets are also supported.

Property dialogs

Property dialogs are available for modification of user objects. Instead of just copying the property dialog from the installed clients, we have designed a new type of dialogs, which we believe will be easier to use. For example, it is now possible to have property dialogs open for several objects at the same time and drag and drop expressions between them.

Layout compliance with installed clients

Additional layout features previously unsupported in the AJAX client have been added, including support for:

- OnOpen message alerts
- Gauges in table cells
- Images in list boxes
- Semantic list boxes
- X-axis scroll in charts
- Balloon pop-ups in charts
- Right-click menu on cycle icons

- Right-click menu on fast type change icons
- Free-floating current selections window
- Bookmark toolbar
- Maximization of sheet objects
- Automatic truncation of text in cells (as in installed client)

Many graphical improvements have also been made, including a complete overhaul of the multi box.

New layout features

In addition to the above, new layout features from QlikView 9 have also been implemented in the AJAX client. This includes the new Clear button, mini charts in tables, button actions, tree-view list box, clickable URL links in table charts, and the new search object.

Report printing

QlikView reports can be printed from the AJAX client.

Performance improvements

The AJAX client has been further optimized for considerably improved speed and rendering performance.

1.13 Java client capabilities

Collaboration objects

The Java client now has full support for user objects and shared objects. Property dialogs are available for modification of objects, as well as undo/redo commands and design grid. The new user sheets are also supported.

New layout features

Additional layout features previously unsupported in the Java client have been added, such as support for gauges in table cells images in list boxes. In addition to this new layout, features from QlikView 9 have also been implemented in the Java client. This includes e.g. the new Clear button, mini charts in tables, button actions, tree-view list box, and clickable URL links in table charts.

Report printing

QlikView reports can be printed from the Java client.

Performance improvements

The Java client has been further optimized for improved communication and rendering performance.

The UI look has been consolidated to appear the same regardless of which platform the client is running under.

1.14 Mobile clients

For the first time it is possible to deploy the power of QlikView analysis on your mobile phone. Our approach is threefold, in order to cover as many platforms and needs as possible.

QlikView for iPhone

The native iPhone client available from Apple's App Store offers a completely new interaction paradigm for QlikView. It optimizes the use of the limited screen real estate while maximizing the use of the iPhone's innovative user interface. Sheets are no longer graphical entities, but rather used as a collection of sheet objects. You navigate between sheet objects using Cover Flow, having one object in focus at any time but still getting context and feedback via miniatures of the other objects below. Users can turn their iPhone to horizontal position to zoom in on an object and shake to clear selections.

Java Mobile client

Whereas the iPhone client will work only on iPhone (and iPod Touch), the Java Mobile (J2ME) client will work on the vast majority of all current mobile smartphones, including Blackberry and Symbian phones. The main requirement is that the phone has a Java Virtual Ma-

chine. This client is more conventional and presents the QlikView sheets more or less as you know them from our traditional clients. Although the experience will be best on large touch-screens, the client can actually be used even on phones with only a numeric keypad.

AJAX on mobile devices

Lastly, there is the option of running our standard AJAX client on mobile devices. We see a clear trend that more and more mobile phone browsers will handle modern AJAX applications in an acceptable manner. Mobile Safari on the iPhone was the first example, but others have followed. This solution may be considered on selected mobile platforms.

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