IBM DB2 QMF Version 8 – Delivers Visual Data On Demand with DB2 UDB for z/OS, V8

Overview

DB2® Query Management Facility (QMF™) Version 8 exploits key new capabilities of DB2 V8, creating an on demand business information platform to serve the needs of any role or responsibility across the enterprise.

Developed in parallel with DB2, and in use throughout the world across job functions, industries, and every DB2 database platform and economy of scale, DB2 QMF has been dramatically enhanced with new data visualization, solution building, Web-enablement, and solution sharing capabilities.

Now the DB2 QMF on demand platform provides users across the enterprise with:

• Support for DB2 UDB V8 functionality, including DB2 Cube Views, long names, Unicode, and enhancements to SQL
• Drag-and-drop building of OLAP analytics, SQL queries, pivot tables, and other business analysis and reports
• Visual data “appliances,” such as executive dashboards, that offer unique, visually rich, interactive functionality and interfaces specific to virtually any type of information task
• A database explorer for easily browsing and identifying database assets and other objects they may reference
• QMF for WebSphere®, allowing ordinary Web browsers to become “zero maintenance” thin clients for visual on demand access to enterprise DB2 business data

With this release, DB2 QMF is offered in several simplified editions, allowing the enterprise to more easily apply its DB2 QMF on demand information strategy to single or multiple database and end user platforms. DB2 QMF Enterprise Edition includes:

• DB2 QMF for TSO/CICS®
• DB2 QMF High Performance Option (HPO)
• DB2 QMF for Windows®
• DB2 QMF for WebSphere


Key Prerequisites

• z/OS® Version 1 Release 3 Base Services (5694-A01), or later, executing in 64-bit addressing mode
• Any processor that supports z/Architecture™

Planned Availability Date

May 16, 2003

At a Glance

DB2 QMF Version 8 delivers:

• OLAP with DB2 Cube Views
• Drag and drop queries and analytics
• Executive dashboards
• DB2 V8 long name and other support
• Enabled for WebSphere Application Server
• Simplified packaging for easier ordering

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To raise productivity, lower business costs, and stay competitive, every organization needs on demand access to corporate data:

- Tailored to roles and responsibilities across the enterprise
- Visualized in formats easiest to understand
- On precisely the scale required
- To any user anywhere

All of these capabilities are delivered — rapidly, reliably, affordably, and flexibly — through IBM’s on demand business information platform DB2 QMF.

**Visual Data On Demand, with Simplified Packaging and Pricing**

DB2 QMF’s long-standing success is built on a model that organizes business intelligence around the entire enterprise and extends it outward to support unique individual needs. This model goes beyond the reach of conventional “point” solutions and single-user products by establishing pervasive production and sharing of business intelligence for virtually any information-oriented task in the organization. It is executed with a seamlessly combined set of strengths unmatched in the industry, including:

- Interfaces everywhere (whether on the Web, in Windows, or TSO/CICS)
- Powerful, versatile data visualization
- Outstanding performance and reliability for accessing relational databases, and native support for advanced features of current DB2 releases
- Solution building, task automation, and data integration for end users, administrators, and developers
- Centralized solution sharing, across database and end-user platforms, to support best practices
- Strong control over a wide range of end user activities, and excellent protection of valuable database server resources
- An architecture that can sustain nearly any workload level and distribute it across processors
- Broad support for open standards, trusted database interfaces, and ubiquitous protocols and languages including XML, Java™, J2EE, SQL, DRDA®, ODBC, JDBC, and Web-based clients and connectivity
- Server-based licensing, providing the freedom to expand user base size at will and build the on demand information enterprise
- Global internationalization, now encompassing 23 national languages

New packaging of DB2 QMF offers simplified selection and pricing to more easily match the on demand information needs of any enterprise, whatever end user and DB2 UDB database platforms may be in use.

**DB2 QMF Enterprise Edition**:

DB2 QMF Enterprise Edition provides the entire DB2 QMF family of technologies, enabling enterprise-wide business information access across end user and database platforms. DB2 QMF Enterprise Edition consists of these components:

- DB2 QMF for TSO/CICS
- DB2 QMF High Performance Option (HPO)
- DB2 QMF for Windows
- DB2 QMF for WebSphere

Other editions of DB2 QMF offer subsets of QMF Enterprise Edition, as follows:

**DB2 QMF Distributed Edition**:

DB2 QMF Distributed Edition provides components to support end users functioning entirely from Web or Windows clients to access enterprise databases. This edition consists of:

- DB2 QMF for Windows
- DB2 QMF for WebSphere

**DB2 QMF Classic Edition**:

DB2 QMF Classic Edition supports end users functioning entirely from traditional mainframe terminals and emulators (including IBM Host On Demand) to access DB2 UDB databases. This edition consists of DB2 QMF for TSO/CICS.

**DB2 QMF for TSO/CICS — Key Features and What’s New in V8**

DB2 QMF for TSO/CICS has long held the position as the leading z/OS-based query environment that has traditionally provided:

- Central sharing of business intelligence solutions
- Query building and prototyping tools
- Robust reporting and data aggregation functions that support a broad range of business processes
- Access across hardware/operating system platforms and database brands through support for advanced DB2 UDB functionality and DB2 UDB federated server
- Centralized control over resource usage and user group permissions
- Data export, print, distribution, and other data handling features in direct response to global customer requirements over many years of continuous development
- Data integration and application development through APIs
- Scalability that encompasses Sysplex and teraplex installations

DB2 QMF for TSO/CICS now offers significant enhancements to core functionality, including:

**End-User Enhancements**

- Names up to 128 characters in length are supported for Auth ID, Current SQLID, and table names. Table column names can be up to 30 characters long. Support is based on whatever length the database allows. Support includes larger data entry fields and the display of names in QMF dialog screens.
- Ability to issue a CALL statement from the SQL Query panel to run a DB2 stored procedure. Output parameters will be placed in QMF substitution variables defined by the user. Result sets returned will have all the features of a result set returned from a query.
- Fully integrated support for Large Object databases: CLOB, BLOB, and DBCLOB; LOB data can be displayed in reports from tables containing LOB columns.
- New edit code “M” displays the associated column metadata in lieu of column data; edit code “M” is the default edit code for LOB data types.
**Governing enhancements, including the ability to limit carriage control characters in the report output format when a print device name is not supplied.**

**Size of global variables specified on the Set and Get Global command has been extended from 55 characters to 2000.**

**New global variable DSQEC_SP_RSM_NUM allows for the specification of a particular result set of a DB2 stored procedure which returns multiple result sets.**

**Support for several new DB2 UDB for z/OS, V8 SQLCODES.**

**Administrator Enhancements**

**An improved install process through a streamlined database installation path and reducing post SMP/E installation work.**

**New global variable DSQEC_CC has been added to provide flexibility in setting the carriage control (CC) key word.**

**DB2 QMF High Performance Option (HPO) — Key Features and What’s New in V8**

DB2 QMF HPO adds a suite of administrative and application capabilities to DB2 QMF for TSO/CICS, including:

- A compiler module, which automatically converts existing DB2 QMF reports (queries and forms) into well structured, well documented, and easily customizable COBOL applications that execute static SQL
- Easy launching of compiled reports from lists and from within CICS
- Governing enhancements, including the ability to limit end-user actions according to calendar, ID, elapsed time, and more
- Tracking and reporting of end-user and query activity

New DB2 QMF HPO capabilities include:

- Automatic generation of stored procedures from QMF Queries.
- Support for long names in DB2 UDB for z/OS, V8 and in the DB2 QMF for TSO/CICS object catalog

**DB2 QMF for Windows — Key Features and What’s New in V8**

DB2 QMF for Windows brings the power of innovative data visualization to serve the widest range of needs — quickly, easily, and affordably.

Building on the traditional strategic capabilities of DB2 QMF for TSO/CICS, DB2 QMF for Windows exploits the ubiquity of 32-bit Windows workstations to greatly extend the DB2 QMF on demand strategy with:

- Development and use of objects across DB2 QMF platforms — allowing users to share between DB2 QMF for Windows, DB2 QMF for TSO/CICS, and DB2 QMF for WebSphere
- Support for — and integration with — universally popular desktop tools and visual conventions, including charting, spreadsheets, summary reports, and geospatial mapping
- Intelligent built-in assistance for query development, such as an Expression Builder

- Drag-and-drop aggregation, summarizing, and formatting of data for rapid report building
- Creating and sharing customized libraries of favorite information resources
- Support for the full range of DB2 UDB data types, including LOBs and user-defined types
- Offloading of report processing functions to distributed Windows CPUs in a true client-server relationship, relieving z/OS connection workloads associated with TSO logs
- Centralized control over activities and resource consumption of distributed Windows clients
- An enterprise-level architecture, unmatched in the Windows product space, that supports dynamic and static SQL, massive result sets and stored procedure results, DB2 UDB’s native Distributed Relational Database Architecture™ (DRDA), and multiple connectivity options

DB2 QMF for Windows now provides significant new data visualization capabilities, as well as many other enhancements, including:

- Support for DB2 Cube Views
  - OLAP analytics made easy for novices with no knowledge of OLAP
  - Drag and drop to create dynamic OLAP reports in minutes and slice, dice, and drill into analytical data
  - Build multiple levels of summary and drill down to related data simply by dropping onto a layout
  - Quickly create multiple viewpoints of data by positioning side dimensions, top dimensions, and measures
  - Format even long and complex reports for printing on common office printers
  - Save reports for centralized sharing with other QMF for Windows and QMF for WebSphere users across the enterprise
- DB2 QMF Visionary Studio for building powerful visual “information appliances” such as executive dashboards
  - Rapidly build and deploy — without programming or compiling — highly intuitive applications that let end users visually zoom into, analyze, and summarize data with unique, interactive behaviors
  - Display data from multiple data sources simultaneously, in intuitive formats and images such as geospatial maps, charts, graphs, stop lights, meters, pick lists, familiar objects, custom graphics, and more
  - Give end users access to all the data they need in the ways that make sense for the entire spectrum of job functions or skill levels
- A new database explorer to:
  - Visually navigate and inspect enterprise database assets — including database servers, databases, tables, views, queries, reports, and DB2 stored procedures
  - Instantly analyze object dependencies, such as which tables are accessed by a given query
  - Create customizable folders of “favorites” for easy navigation to frequently used resources
• New query and report building capabilities, with emphasis throughout on visual drag-and-drop, including:
  - A visual query builder that displays tables, columns, and SQL in an easy-to-manage layout
  - New across reports and pivot tables with multiple levels of grouping on the horizontal and vertical axes
  - A layout designer allowing easy manipulation of query results, such as the rapid creation of derived columns from returned columns
  - Conditional formatting of query results, allowing specified values or thresholds to be automatically highlighted with colors or other attributes

In this release, DB2 QMF for Windows also provides multiple technical enhancements to support faster development and implementation of enterprise-wide solutions, including:

• SQL Expression Builder updates to support new SQL functions in DB2 UDB for z/OS, V8
• A new internal expression language for supporting complex conditions, form calculations, and custom delimitization, eliminating the previously required installation of Object REXX
• Data import and export as XML, including generation of a simple XSL stylesheet (on export) that defines rows and columns
• Automatic migration or creation of catalogs to support long names (and related operations, such as rebinding of host variables with increased lengths), allowing faster transition from prior versions of DB2 QMF and DB2 UDB

Many more enhancements to implementation, management, connectivity, and ease of use have been implemented in QMF for Windows V8. A complete listing is provided in the product online help facility, and on the Web at:

http://www.ibm.com/qmf

DB2 QMF for WebSphere — New Offering

DB2 QMF for WebSphere is the DB2 QMF family’s browser-based portal to business information on demand. A new offering as of this release, DB2 QMF for WebSphere is a completely reengineered version of Web-based data access previously released as QMF Query for Java.

DB2 QMF for WebSphere supports every WebSphere platform and makes Web browsers “zero maintenance” clients for DB2 UDB without plug-ins or special downloads. Users can connect easily via an intranet or the Internet to share many of the query, reporting, and OLAP functions found in DB2 QMF for Windows and DB2 QMF for TSO/CICS. Native support for DB2 UDB security and centralized control over end-user permissions help protect database resources as Web access is deployed across the organization.

Features of this new offering include:

• A completely redesigned and enhanced multidocument interface, with more functionality available throughout
• Support for DB2 Cube Views, allowing drag-and-drop development of OLAP analysis
• Drag-and-drop grouping and formatting of query results

• New support for DB2 QMF prompted queries, DB2 QMF form functionality, new charting formats, DB2 UDB for z/OS, V8 and DB2 QMF V8 long names, high-volume, unattended batch reporting, and DB2 QMF linear procedures
• An SQL expression builder, similar to the expression builder of DB2 QMF for Windows
• User edit routines, written in Java, allowing task automation, and a Java class API and Web service API for application integration on Web Application Servers
• Administrative and governing functions integrated with the DB2 QMF for Windows administrator, providing unified management of both Windows and Web-based users

DB2 QMF for WebSphere makes it possible for an enterprise of any size to immediately deploy to the Web both the existing DB2 QMF business assets developed over time and already essential to business operations, as well as solution development capabilities to end users of any level of experience.

Product Positioning

DB2 QMF has fully completed a multirelease transition. Its long-standing legacy as IBM’s leading 390-based query and reporting application is transformed by a broad new set of capabilities that now position DB2 QMF as a key technology for enabling all-inclusive, on demand business intelligence across the enterprise. Highlights of this transition are as follows:

• From stand-alone IBM product to orderable feature of DB2 UDB for z/OS
• From z/OS-centric application to business intelligence platform, supporting all user skill levels, all DB2 databases, and federated databases
• From queries and reports to visual data on demand, including interactive analytics
• From finite distribution to universal distribution
• From “back room” business processes to the front lines of business wherever information is needed to do a job

DB2 QMF is already in the data centers of IBM’s best customers worldwide, is constantly growing its revenue base, and is poised to be one of the key technologies that will contribute to the success of the IBM on demand computing initiative in the coming years. DB2 QMF’s unique position in the worldwide corporate market make it an ideal platform for customers to discover that an on demand computing approach is both feasible and beneficial and can have immediate impact in any chosen area of their business.

An important premise of DB2 QMF positioning within the business intelligence space may be summarized as “breadth and depth.” While other offerings may have depth in a particular function, they usually show limitations in other areas, such as the ability to customize, integrate, or scale. In contrast, DB2 QMF offers data processing functions previously found only in multiple separate competing products, and yet scales extremely well and can be customized to the requirements of virtually any knowledge worker, whether a high-level executive, a skilled analyst, or the average manager, sales person, or trainee.

In addition, DB2 QMF has anticipated the industry migration to broadly dispersed clients and server-based licensing, a combination that serves to make information
resources both universally available and universally affordable — essential characteristics of true on demand business intelligence.

Key differences between DB2 QMF and competitive business intelligence offerings may be summarized as follows:

- **DB2 QMF provides a foundation for business intelligence, instead of pockets.**
- **DB2 QMF provides multiple categories of business intelligence functions, instead of a subset.**
- **Within each category, DB2 QMF “out of the box” provides the functions required by the broadest base of users, and makes them easy and accessible, and leaves the highly specialized functions to highly specialized tools.**
- **DB2 QMF’s “out of the box” capabilities are easily extended through automation, integration, and applications developed with APIs and scripts that even end users can build and share.**
- **DB2 QMF safely supports multiple database platforms and vendors, including massive DB2 production databases, instead of requiring that data be staged at special servers or piped through generic, low-performing connections.**
- **DB2 QMF gives administrators strong centralized control over end-user actions and permissions, whether they are using Web, Windows, or TSO/CICS clients.**
- **DB2 QMF costs are predictable, instead of putting growing “per seat” costs or escalating upgrade charges in the customer’s future. DB2 QMF actually costs less per person the more widely it is used throughout the enterprise, due to server-based licensing. In addition, the scalable architecture and built-in manageability of QMF keep administration and deployment overhead to a minimum as usage grows.**

DB2 QMF is tightly integrated with the zSeries® architecture, which provides a fluid yet secure environment whereby applications, data, and business processes have access to existing resources managed with greater flexibility, higher levels of utilization, and lower overall costs. Customers running DB2 QMF will be well positioned to deal with the exponential explosion of data, with the capability to sense and respond to market shifts and changing demands as they occur.

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Technical Information

Hardware Requirements

DB2 QMF V8 Features of DB2 UDB for z/OS, V8

- DB2 QMF for TSO/CICS requires a display station supported by Graphical Data Display Manager (GDDM).
- DB2 QMF HPO requires a display station supported by ISPF.
- DB2 QMF for Windows requires a workstation that supports:
  - A Windows 32-bit operating system
  - Network connectivity
  - Approximately 100 MB of HDD space
  - A minimum of 128 MB of RAM
- DB2 QMF for WebSphere hardware requirements include those required for the supported version of WebSphere Application Server.

Software Requirements: The host software requirements are those required to run DB2 UDB for z/OS V8.

DB2 QMF for Windows, V8, runs on 32-bit operating systems as follows:

- Microsoft Windows 98
- Microsoft Windows NT 4.0 SP6a
- Microsoft Windows 2000
- Microsoft Windows ME
- Microsoft Windows XP

DB2 QMF for Windows requires at least one of the following on each user machine for database client access:

- A TCP/IP product that provides a WinSock V1.1 interface
- An SNA product that provides a CPI-C interface
- The IBM DB2 UDB Runtime Client, V7.1, or later
- One or more ODBC 2.x or 3.x drivers

DB2 QMF for Windows supports the following DB2 UDB servers:

<table>
<thead>
<tr>
<th>Product</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 Universal Database Server for z/OS</td>
<td>V8.1</td>
</tr>
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</tr>
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<td>V6.1</td>
</tr>
<tr>
<td>DB2 for VM/VSE</td>
<td>V7, V6, V5</td>
</tr>
<tr>
<td>DB2 for iSeries</td>
<td>V5.2, V5.1</td>
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<tr>
<td>DB2 for AS/400</td>
<td>V4.5</td>
</tr>
<tr>
<td>DB2 Universal Database for Linux, UNIX®, and Windows</td>
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The following DB2 QMF functions have software dependencies:

- IBM Object REXX Interpreter Edition V2.1.0 5639-M69 is required for the following QMF for Windows functions:
  - Procedures with logic
  - @IF REXX function
- The DB2 QMF for Windows Spatial Viewer requires DB2 Spatial Extender Enterprise Edition (EE) or Extended Enterprise Edition (EEE) V7.2 with Fixpack 5 or DB2 Spatial Extender V8.1
- Performing DB2 IM Scoring functions via the DB2 QMF for Windows Expression Builder requires DB2 IM Scoring V7.1 feature of DB2 UDB Extended Edition or Enterprise Extended Edition V7.2 (5724-A60) or DB2 UDB Enterprise Server Edition V8.1 (5724-B93)
- Use of DB2 QMF for Windows with natural language queries requires English Wizard 3.1 or EasyAsk 6.0 from IBM Business Partner Linguistic Technologies
- Use of spreadsheet application add-ins with DB2 QMF for Windows requires one or both of:
  - Microsoft Excel 7.0, or later
  - Lotus 1-2-3 Millennium Edition, or later
- Use of charting in spreadsheet applications with DB2 QMF for Windows requires one or both of:
  - Microsoft Excel 97, or later
  - Lotus 1-2-3 Millennium Edition, or later
- The software requirements for QMF for WebSphere are as follows:
  - QMF for WebSphere, V8, runs on IBM WebSphere Application Server (WAS), V4.0, or later, on any platform supported by WAS
  - QMF for WebSphere requires one of the following Web browsers (with JavaScript support enabled) on each user machine:
    - Microsoft Internet Explorer, Version 5.5, or later
    - Netscape Navigator, Version 6.2, or later

QMF for WebSphere requires client support from one of the following DB2 UDB products on the WAS server machine, depending on the platform:

<table>
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**Planning Information**

**Packaging:** The DB2 QMF Features of DB2 UDB Server for z/OS, except as noted below, will be shipped on 3480 cartridges.

A Program Directory for any DB2 QMF optional features will be included, if the feature has been ordered.

**Order**

<table>
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<tr>
<td>DB2 QMF Enterprise Edition</td>
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<td>Program Directory</td>
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<td>DB2 QMF Classic Edition</td>
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<td>DB2 QMF for Windows and DB2 QMF for WebSphere</td>
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<td>will be shipped on CD-ROM.</td>
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<td>SES1-2278</td>
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<tr>
<td>DB2 QMF for WebSphere CD-ROM</td>
<td>SES1-2279</td>
</tr>
</tbody>
</table>

The DB2 QMF for Windows and QMF for WebSphere CD-ROMs also contain U.S. English publications in softcopy format.

DB2 QMF Visionary Studio will be available via Web download. The Program Directory describes how to access Preventive Service Planning (PSP) information, which will describe the download details.

**Security, Auditability, and Control**

DB2 UDB for z/OS, V8 uses the security and auditability features of the host z/OS systems. It also provides facilities for the protection and control of its resources. These facilities include controls for:

- System access
- Data access and control
- Concurrent access
- Data recovery
- Accounting

**Ordering Information**

Ordering instructions and order processing availability will be communicated when IBM announces general availability of this product.

**Terms and Conditions**

The terms for DB2 UDB for z/OS, V8, licensed under the IBM Customer Agreement are unaffected by this announcement. Refer to Software Announcement 203-019, dated January 28, 2003.

**Prices**

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