



# IBM QMF for Windows for AS/400 V7 – For All Your Operational and Warehouse Query Needs

## Overview

Query Management Facility (QMF™) for Windows™ is a multipurpose scalable enterprise query environment for business reporting, data sharing, server resource protection, robust application development, and native connectivity to DB2® for AS/400®. It is architecturally coupled with DB2 across platforms by the enterprise data sharing standard Distributed Relational Database Architecture™ (DRDA®).

Designed for situations where the broadest range of needs must be met with the minimum number of tools, QMF for Windows strategically excels at delivering the most essential and most frequently required business reporting capabilities for a competitive advantage.

What's new for QMF for Windows for AS/400 Version 7

- Java™-based query allows users to submit queries to DB2 via a browser, as well as the ability to view a user's queries and tables from a browser.
- Ease of use with a point-and-click/drag-and-drop interface to QMF form creation. Aggregation, grouping, and formatting can be performed in the query results. Enhanced sorting allows the results of a query to be sorted on more than one non-contiguous column.
- An enhanced object list window adds Windows tree control for more intuitive navigation and location of QMF objects.

## Additional QMF Benefits

QMF for Windows allows novices and experts to rapidly formulate the queries and reports they need. They also can easily send data to other desktop applications, share reports with other QMF users, and publish data to the Web. Many common tasks are streamlined for maximum productivity through report automation with QMF procedures and scheduling.

For administrators, QMF for Windows is a single product with capabilities needed to safely open DB2 for AS/400 to Windows and Web users without database gateways, middleware, or ODBC drivers to manage.

Developers obtain a powerful Windows API to rapidly build data access and data update applications. QMF for Windows allows full exploitation of DB2 performance, SQL syntax, and advanced database performance techniques such as static SQL, uncommitted read, and DB2 stored procedures.

QMF for Windows also delivers:

- Centralized and secure protection of enterprise database resources
- Server-based pricing, unlimited users per server, and centralized install

## Planned Availability Date

September 29, 2000

## At a Glance

Reliable data access throughout your enterprise with instant answers to mission-critical questions — from Windows desktops or browsers around the world.

Version 7 enhancements include:

- Java-based query from a Web browser
- Aggregate, group, and format in the query results
- Point-and-click/drag-and-drop interface to QMF Form creation
- Sort results of a query on more than one non-contiguous column
- Windows tree control for more intuitive navigation and location of QMF objects
- Report Center which serves as a personal data portal for your desktop to launch centrally shared queries and reports, send results to desktop tools and browsers, and share formatted spreadsheets with your workgroup
- Large Object support
- Procedures with REXX
- Enhanced Form (report template) capability

### For ordering, contact:

Your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at

**800-IBM-CALL**

Reference: AE001

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## Description

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QMF for Windows for AS/400 Version 7 Key Enhancements:

- Run SQL queries from a browser through Java servlet support
- Aggregate, group, and format in the query results
- Point-and-click/drag-and-drop interface to QMF form creation
- Sort results of a query on more than one non-contiguous column
- Windows tree control for more intuitive navigation and location of QMF objects
- Built-in Report Center for easy access to favorite personal and shared reports
- Enhanced Form (report template) capability
- Human factors enhancements which include a menu of items displayed with query results and more toolbar buttons
- Option to use DB2 Forms when Table Editor invoked
- Option to remember DB2 passwords when running on Windows NT™
- QMF Host compatibility:
  - Procedures with REXX logic
  - Support of Form Detail variations
  - Support of Form Column definitions
  - Support of RESET GLOBAL command
  - Support of new toolbar/window in which single QMF commands can be entered and executed (analogous to the command line in QMF Host)

**Note:** The QMF for Windows Version 7 “Try and Buy” can be obtained at general availability of the product from the QMF Web site at:

<http://www.ibm.com/qmf>

As a general-purpose query environment for DB2 datamarts, data warehouses, and enterprise operational data, QMF for Windows is in many ways more powerful and more versatile than special-purpose database front ends and single-user query tools. This is because QMF for Windows is designed for multi-user, production level data access where the broadest base of business operations must be satisfied.

QMF for Windows strategically excels at the most commonly required data access and reporting functions, providing a range of capabilities fundamental to corporate-wide productivity.

Windows users (Windows 95/98/NT/2000) may explore data within the point-and-click QMF for Windows query interface, build robust reports, automate even the most complex tasks with procedures, and automatically store the resulting QMF “objects” in a common object space shared by other QMF users across the enterprise.

Alternatively, the QMF application programming interface (API) allows you to stay entirely within your favorite Windows applications (such as Lotus® 1-2-3®, Microsoft™ Excel, or Microsoft Access) as you execute QMF objects, query multiple DB2 databases, and merge the resulting data into the spreadsheet, database, or other desktop application of choice. You can quickly

convert an unlimited number of your existing QMF reports for publishing to your Web server of choice, and schedule unattended refreshes, rapidly creating “warehouses” of business reports accessible to all through a Web browser.

These robust data distribution and integration capabilities are packaged with advanced administrative controls — accessible only to authorized database administrators — that prevent waste or abuse of database server resources. Administrators have a wealth of options available, from closing access to a database server altogether, restricting groups of users to a “read only” status (disallowing ad hoc query access), to finely-tuned limits on rows fetched and re-use of connections to the database. Database access techniques such as static structured query language (SQL), uncommitted read, and DB2 stored procedures are supported to minimize contention for database resources and maximize the value obtained from any given database server. In addition, detailed object use tracking helps locate heavily used (or unused) queries and forms, and identify every object ever executed by a user, and how often.

A summary of benefits to users, application developers, database administrators, and the enterprise follows.

### User Benefits

- Use Web browsers to query DB2 and share QMF reports with others
- Easily send data to spreadsheets and other favorite desktop tools
- Build queries without needing to know SQL
- Execute complex queries and advanced DB2-specific SQL
- Query multiple (QMF for Windows for AS/400) servers
- Sort, summarize, aggregate, and format query results with easy right-click menus
- Easily store, sort, filter, and locate saved objects (queries, reports) according to user preference
- Automate common tasks with procedures and scheduling
- Publish reports to the Web and quickly create automated Web warehouses of enterprise data
- Save query results as new summary tables back at the database server

### Developer Benefits

- Integrate with Excel, Visual Basic, Powerbuilder — all OLE 2.0 compliant applications — using simple application macros or developer environments such as Visual Age for Basic or Visual Basic
- Eliminate database gateways, middleware or ODBC drivers
- Integrate with any Windows OLE 2.0 automation client application
- Call on QMF for Windows services with its API
- Use HELP for supplied sample API code as templates
- Bring industrial strength to ordinary desktop languages
- Leverage skills of desktop development community
- Query in native DB2 syntax (the server’s SQL)
- Get the reliability, performance, and security of DB2

- Let QMF for Windows automatically manage DB2 resources (threads, conversations, states) in the background
- Use performance enhancing technologies such as static SQL directly in your Windows applications
- Shield users from complexity of connections
- Retrieve QMF for Windows objects stored on servers and launch from within Windows applications
- Eliminate manual export/import procedures from host to PC

#### Administrator Benefits

- Protect DB2 from runaway queries and novice users with robust governing
- Use existing DB2 security
- Safely store Windows user resource limits at the DB2 database server
- Supports different limits for different users, groups, and schedules
- Temporarily suspend a user's limits
- Use many governing criteria, including:
  - Schedule by time of day, day of week
  - Maximum rows/bytes to fetch
  - Amount of time a cursor can remain open without being used
  - Amount of time to wait for a response from the DB2 database server
  - Amount of time a connection to a DB2 database server can remain unused
  - Set query isolation level
  - Allow/disallow running static SQL or stored procedures
  - Allow/disallow ad hoc query capability
  - Allow/disallow SQL verbs including:
    - ALTER, CALL, CREATE, DELETE, DROP, GRANT, INSERT, REVOKE, UPDATE, COMMENT, EXPLAIN, LABEL, LOCK, SELECT, SET
- Deploy browser-based querying to minimize client code installation maintenance

#### Enterprise Benefits

QMF for Windows is built for the networked enterprise with the understanding that you need to connect and protect your data sources. QMF for Windows is a unique Windows querying tool, providing:

- Top performance
- Extensive control
- Features for optimizing access to large databases

Governor settings are controlled from the QMF for Windows Administrator which is included with the product. You can easily add to the list of servers available to your users, bind database packages, grant authority, and administer resource limits by groups and schedules, giving you control over user actions and resource consumption that can automatically change by day-of-week and by time-of-day.

In addition, QMF for Windows allows you to specify whether or not it will track usage and execution of QMF for Windows objects.

Now your enterprise can:

- Centralize control over server resources
- Eliminate runaway queries
- Eliminate extended open cursors
- Track user access to queries
- Maintain full security, standard authorizations
- Exploit DB2 performance, system integrity
- Support a variety of DB2 database servers

#### Minimizing Client Maintenance

QMF for Windows offers enterprise-wide data access through browsers as well as centralized install wherever Windows-based clients are preferred. Fewer software installations at client machines and lower client maintenance cost is the result.

For browser-based querying, any Web browser that supports frames can be used to query any DB2 server the administrator wishes to make available. QMF for Windows supports existing DB2 security (userids and passwords) in this scenario and requires no new software or plug-ins to be installed on the end user's machines.

Where, in addition to DB2 security, QMF for Windows governing capabilities and other Windows-based features may be desired, administrators can centralize the installation, configuration, and day-to-day client operation of QMF for Windows by opting to contain configuration settings (Server Definition Files (SDFs)), pre-configured client installation packages, or the QMF for Windows product itself on a networked Windows NT server. You can allow each user to run the product from the server, have their own SDF or you can create a single SDF that is shared by multiple users over a file-sharing network.

The advantage to these approaches is they dramatically reduce installation and configuration of individual client PCs, reduce total cost of ownership, and allow for a "thin client" installation at each Windows workstation wherever desired.

#### Connectivity

QMF for Windows V7 implements distributed relational database architecture (DRDA) and provides native support for TCP/IP connectivity to DB2 for AS/400 V4R3 (or higher). For connectivity to SNA environments, it employs the Advanced Program-to-Program Communication (APPC) language and the Common Programming Interface-Communications (CPI-C) interface. By using the CPI-C interface, QMF for Windows operates with the SNA connectivity solution of your choice, such as, IBM eNetwork™ Personal Communications, Microsoft SNA Server, Novell NetWare for SAA, and others.

#### Year 2000

This product is Year 2000 ready. When used in accordance with its associated documentation, it is capable of correctly processing, providing, and/or receiving date data within and between the twentieth and twenty-first centuries, provided that all products (for example, hardware, software, and firmware) used with the product properly exchange accurate date data with it.

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The service end date for this Year 2000 ready product is September 29, 2002.

### **Euro Currency**

This program is EuroReady.

For more information on the implications of the euro, visit the IBM euro Web site at:

<http://www.ibm.com/euro>

### **EuroReady Products**

IBM considers an IBM product to be EuroReady if the product, when used in accordance with its associated documentation, is capable of correctly processing monetary data in the euro denomination and of respecting the euro currency formatting conventions (including the euro sign). This assumes that all other products (for example, hardware, software and firmware) that are used with this product are also EuroReady. IBM hardware products that are EuroReady may or may not have an engraved euro sign key on their keyboards.

Currently, EuroReady status applies primarily to IBM products specific to the EMU countries. Products that are not specific to these countries are deemed to be "not ready" for euro unless otherwise stated in the product's country-specific specifications.

### **IBM Hardware Ready**

IBM supplies certain IBM products which include third party software (pre-loaded or not) and/or third party attached hardware. In these instances IBM is not in a position to assert that these third party products are, in themselves, EuroReady.

Therefore, such IBM products will be designated as Hardware ready.

### **EuroReady Solutions**

IBM considers a solution to be EuroReady when the solution providers have:

- Analyzed the euro requirements, including the need to comply with relevant EC rules
- Built in appropriate function

and can clearly demonstrate this by:

- Detailing euro related requirements
- Describing how these will be implemented in the solution
- Declaring when the implementation will be generally available

The euro capabilities of a EuroReady solution will be clearly identified as features of the Solution specification as described in the contracts document.

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## **Product Positioning**

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Positioning of QMF for Windows is summarized by the phrase "Business Intelligence (BI) starts here." Reliable query and reporting tools that are easy to set up and use remain important to DB2 customers. Offering such a tool designed specifically for the DB2 enterprise can be expected to enhance the success of any BI strategy. By offering fast query performance from the Windows environment, execution of QMF for Windows commands, and extensive governing control over user actions and DB2 resource consumption, QMF for Windows is a natural selection over and above any other for customers who want to extend their industrial-strength capabilities to applications in the Windows environment and on the Web.

QMF for Windows is also offered as a separately orderable product, licensed to access DB2 UDB workstation databases (such as DB2 for NT, DB2 for AIX®, and so on) as well as a S/390® license to access any DB2.

### **Trademarks**

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# IBM US Announcement Supplemental Information

June 12, 2000

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## Education Support

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A QMF™ for Windows™ for End Users class (U4520) and a QMF for Windows for Advanced Users class (U4521) are available.

For IBM class schedules, call 800-IBM-TEACH (426-8322) or access the Web at:

<http://www.ibm.com/services/learning>

To enroll in IBM internal classes, access the Web at:

<http://w3.education.ibm.com>

QMF for Windows onsite product, administration, and configuration education is provided for a fee from the following IBM Business Partner:

Rocket Software, Inc.  
Two Apple Hill Drive  
Natick, MA 01760  
508-655-4321

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## Offering Information

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Product information will be available on day of announcement through Offering Information (OITool) at:

<http://www.ibm.com/wwoi>

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## Publications

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Publications can be ordered at availability. To order, contact your IBM representative, or subscribe through Publication Notification System (PNS), or by direct order.

### Open Enterprise

QMF for Windows implements the following key industry standards:

- DRDA® — The Open Group's DRDA is used to communicate with the DB2® family of relational databases.
- TCP/IP and SNA — Communication protocols supported by host QMF and QMF for Windows. The DRDA Application Requester (AR) and DRDA Application Server (AS) functionality can now be implemented using these standard protocols.
- SQL 92 Entry Level — Level of SQL with which QMF (or QMF for Windows) is compliant.

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## Technical Information

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### Specified Operating Environment

**Hardware Requirements:** Server hardware requirements are those required to run DB2 for AS/400® (V4R3 or higher).

Workstation hardware requirements are those needed to run the Windows software as described in the **Software Requirements** section.

QMF for Windows for AS/400 requires approximately 10 MB of free disk space on each Windows workstation, and about the same memory as needed by a typical Windows suite application.

**Software Requirements:** This section describes the minimum software requirements for QMF for Windows.

QMF for Windows runs on 32-bit platforms as follows:

- Microsoft™ Windows 95
- Microsoft Windows 98
- Microsoft Windows NT™
- Microsoft Windows 2000

QMF for Windows may connect to DB2 for AS/400 V4R3 (or higher) via native TCP/IP or to the SNA environments of that or other DB2 versions.

For TCP/IP connectivity, QMF for Windows must be able to establish a TCP connection from the Windows workstation to the remote host and remote port (the port on which DB2 is listening). This can be established with many 32-bit WinSock products, including those provided with Windows 95, Windows 98, Windows NT, and Windows 2000.

For SNA connectivity, QMF for Windows requires an SNA/CPI-C product on each Windows client. These products are the interface between QMF for Windows and the APPC verb set used by the SNA environment to manage server/requester relationships.

Customers should ensure they have the latest corrective service or maintenance for their SNA product. Contact your SNA software vendor's technical support services personnel for this information.

QMF for Windows requires a WinSock 1.1 interface to the installed TCP protocol stack. The Microsoft TCP/IP protocol provided with each Windows 9x, Windows NT, and Windows 2000 provides the required support.

QMF for Windows can install spreadsheet add-in buttons and menu commands for direct access from within Microsoft Excel Version 7, Microsoft Excel 97, or Microsoft Excel 2000.

*This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: <http://www.ibm.com>.*

## Java™ Support

The Java SQL query support provided with QMF for Windows requires an application server product that supports the Java servlet standard. Following is a list of supported application server products, although products not on this list that provide Java servlet support should also work. In addition, a JDBC driver providing connectivity to any of the database products supported by QMF for Windows is required on the application server platform. (Such a driver is included with the supported database products.)

- IBM WebSphere™ Application Server for AIX®, Sun Solaris, and Windows NT, Version 2.0 or later
- Sun Java Web Server Version 1.1.3 or higher

**Performance Considerations:** All factors relevant to performance are described in the *Installing and Managing QMF for Windows* publication which ships with the product.

## Planning Information

### Query Manager/400 Migration Tool

Rocket Software developed the Query Manager/400 Migration Tool to allow businesses that have accumulated libraries of query objects (queries and forms) in Query Manager for AS/400 to immediately convert and use those objects in the QMF for Windows query environment.

This tool quickly creates copies of existing Query Manager/400 objects and saves them as QMF for Windows objects. The new objects can be used immediately in QMF for Windows while the Query Manager/400 objects remain intact.

To obtain a copy of the Query Manager/400 Migration Tool, access the following Web site:

<http://www.rocketsoftware.com/qmf>

You may also contact Rocket Software at 508-655-4321 in Natick, Massachusetts.

### Packaging

QMF for Windows V7 is distributed in one package with the following:

- IBM International Program License Agreement (GC27-0762)
- Proof of Entitlement
- One CD-ROM (all supported languages are shipped on the same CD-ROM)
- Two publications: *Getting Started with QMF for Windows* and *Installing and Managing QMF for Windows*.

**Note:** QMF for Windows (available separately or included with DB2 Warehouse Manager) provides easy-to-use querying and reporting for all DB2 database platforms. QMF for Windows supplies metadata that populates the Information Catalog with QMF for Windows queries and procedures, enabling these objects to be located and launched from within the Information Catalog.

## Security, Auditability, and Control

The announced product uses the security and auditability features of the supported database servers and their operating systems.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

## Ordering Information

QMF for Windows uses the AS/400 tiered pricing model.

Program Name: QMF for Windows for AS/400 (5697-G24)

**Basic License:** To order a basic license, specify the program number and feature number 9001 for asset registration. For a processor-based one-time charge (PBOTC), specify the feature number below that corresponds to the group that contains the designated machine.

Order Type Description	PBOTC Feature Number	Group Number
Program Package	0001	P05
Program Package	0002	P10
Program Package	0003	P20
Program Package	0004	P30
Program Package	0005	P40
Program Package	0006	P50

### Group to Group Upgrades

P05 to P10	0007
P05 to P20	0008
P05 to P30	0009
P05 to P40	0010
P05 to P50	0011
P10 to P20	0012
P10 to P30	0013
P10 to P40	0014
P10 to P50	0015
P20 to P30	0016
P20 to P40	0017
P20 to P50	0018
P30 to P40	0019
P30 to P50	0020
P40 to P50	0021

### Distribution Media

Media	Feature Number
CD-ROM	5819

### National Language Version (NLV) Features

Description	Language Feature
English SBCS	2924

Contact your sales channel for Support Line pricing information.

**Customization Options:** Select the appropriate feature numbers to customize your order with delivery options desired. These features can be specified on the initial or MES orders.

**Description** **Feature Number**

**Initial Shipments**

Serial Number Only (suppresses shipment of media and documentation) 3444

Ship Media Only (suppresses initial shipment of documentation) 3470

Ship Documentation Only (suppresses initial shipment of media) 3471

**Expedite Shipments**

Local IBM Office Expedite (for IBM use only) 3445

Customer Expedite Process Charge (\$30 charge for each product) 3446

Expedite shipments will be processed to receive 72-hour delivery from the time IBM Software Delivery and Fulfillment (SDF) receives the order. SDF will then ship the order via overnight air transportation.

**Terms and Conditions**

**Licensing:** IBM International Program License Agreement. Proofs of Entitlement (PoE) are required for all authorized use.

**Limited Warranty Applies:** Yes

**Program Services:** Available until September 29, 2002.

**Money-Back Guarantee:** Two-month, money-back guarantee

**Copy and Use on Home/Portable Computer:** No

**Volume Orders (IVO):** Yes, contact your IBM representative.

**Passport Advantage Applies:** No

**Passport Advantage Subscription Applies:** No

**Usage Restriction:** Yes

**Support Line:** Does not apply

**AIX/UNIX® Upgrade Protection Applies:** No

**Entitled Upgrade for Current AIX/UNIX Upgrade Protection Licensees:** No

**AS/400 Software Subscription Applies:** Yes

**Variable Charges Apply:** Yes

**Educational Allowance Available:** Yes, 15% education allowance applies to qualified education institution customers.

**Prices**

Program Name: QMF for Windows for AS/400 5697-G24

**Basic License:** To order a basic license, specify the program number and feature number 9001 for asset registration. For a processor-based one-time charge (PBOTC), specify the feature number below that corresponds to the group that contains the designated machine.

Order Type Description	PBOTC Feature Number	Group Number	One-Time Charge
Program Package	0001	P05	\$ 3,000
Program Package	0002	P10	3,000
Program Package	0003	P20	12,000
Program Package	0004	P30	12,000
Program Package	0005	P40	20,000
Program Package	0006	P50	20,000

**Group to Group Upgrades**

P05 to P10	0007	0
P05 to P20	0008	9,000
P05 to P30	0009	9,000
P05 to P40	0010	17,000
P05 to P50	0011	17,000
P10 to P20	0012	9,000
P10 to P30	0013	9,000
P10 to P40	0014	17,000
P10 to P50	0015	17,000
P20 to P30	0016	0
P20 to P40	0017	8,000
P20 to P50	0018	8,000
P30 to P40	0019	8,000
P30 to P50	0020	8,000
P40 to P50	0021	0

Description	Feature Number	Charge
Customer Expedite Process Charge	3446	\$30

#### Distribution Media

Media	Feature Number
CD-ROM	5819

Contact your sales channel for Support Line pricing information.

**Variable Charges:** The applicable processor based one-time charge will be based on the group of the designated machine on which the program is licensed for use. If the program is designated to a processor in a group for which no charge is listed above, the charge of the next higher group listed applies. For movement to a machine in a higher group, an upgrade charge equal to the difference in the then current charges between the two groups will apply. For movement to a machine in a lower group, there will be no adjustment or refund of charges paid.

**Customer Financing:** IBM Global Financing offers attractive financing to credit-qualified commercial and government customers and Business Partners in more than 40 countries around the world. IBM Global Financing is provided by the IBM Credit Corporation in the United States. Offerings, rates, terms and availability may vary by country. Contact your local IBM Global Financing organization. Country organizations are listed on the Web at:

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 Atlanta, GA 30301-2690

You can also contact your local IBM Business Partner or IBM representative. To identify them, call 800-IBM-4YOU.

**Note:** Shipments will begin after the planned availability date.

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#### Year 2000 Readiness Disclosure

Statements made in this announcement regarding Year 2000 are "Year 2000 Readiness Disclosures" under the Year 2000 Information and Readiness Disclosure Act of 1998, a U.S. statute enacted on October 19, 1998.