


Beyond Query/400


IBM System i™

Beyond Query/400: IBM DB2 Web Query for System i

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i want stress-free IT.
i want control.
i want an i.

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IBM System i

DB2 for i5/OS Home Page

ibm.com/systems/i/db2

- Your portal to everything DB2!
- General Information
- See it Action Demos
- What's New
- Education Roadmaps
- **HOW TO Papers**
 - Click on SUPPORT
 - Articles and White Papers
- Including:
“Why System i for BI”
http://www-03.ibm.com/servers/eserver/iseries/db2/pdf/why_system_i_for_bi.pdf



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Why do BI?

- Spreadsheet Analysis
- Query and Reporting
- Data Mining
- Slicing and Dicing

- Budget/Planning
- Sales/Inventory Analysis
- Claims Analysis
- Demand Forecasting
- Market Basket Analysis
- Financial Reporting (compliance)
- Customer Relationship Marketing
- Business Performance Measurement
- Loan Risk Assessment
- Profitability Analysis
- Supplier Analysis
- Balanced Scorecard

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Know Your Audience

Developer

Technical:
Capable of developing application around the tool.
Can create reports and queries from scratch.

Power User And Analyst

More tech than Business:
Capable of using a tool to create reports and queries from scratch.

Non-Technical Business User

More Business Than Tech:
Access must be easy.
Data-Driven.

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IBM DB2 Web Query for System i

- IBM delivers a Web-based query and report writing product that replaces IBM Query for iSeries (Query/400)
- Base Product
 - Report and graphing Assistants
 - Power Painter
 - Spreadsheet integration
 - Web-enable Query/400 reports
- Additional IBM Features
 - Active Reports (Disconnected)
 - On Line Analytical Processing
 - Developer Workbench
- Additional Add-On Available
 - ERP Adapters
 - Database/Cube/Mining Connectors
 - Extract/Transformation/Load

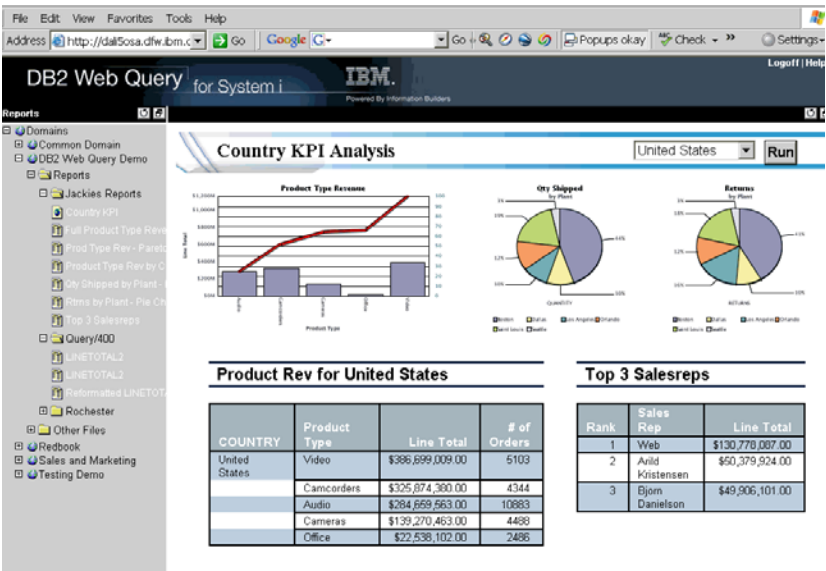
For more details, refer to:
<http://www.ibm.com/systems/i/software/db2/webquery>



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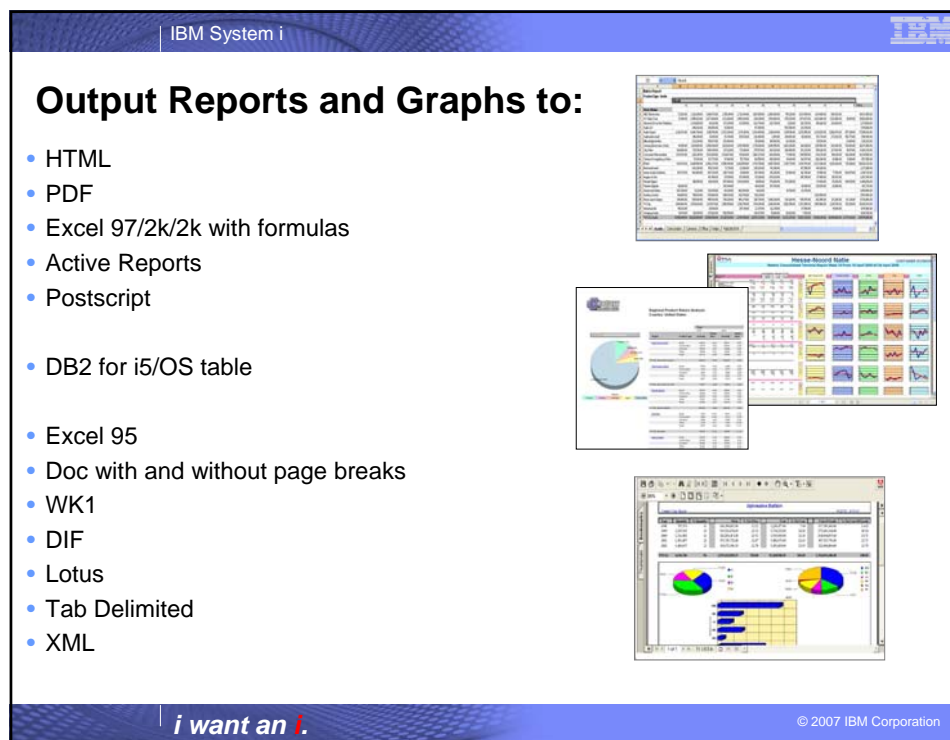
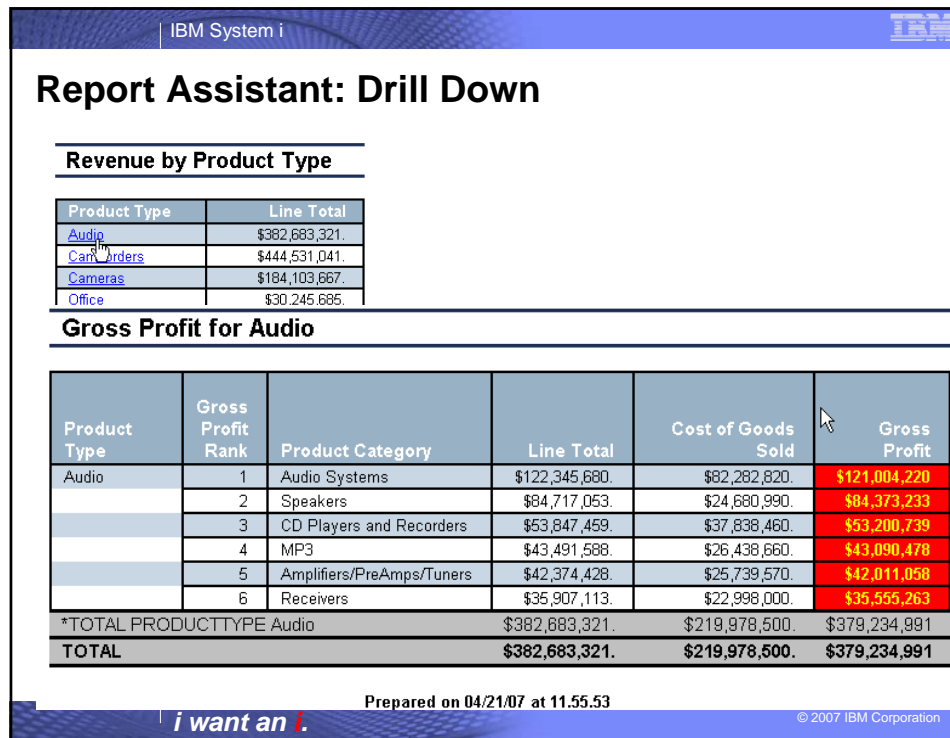
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DB2 Web Query interface



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MS Excel Integration

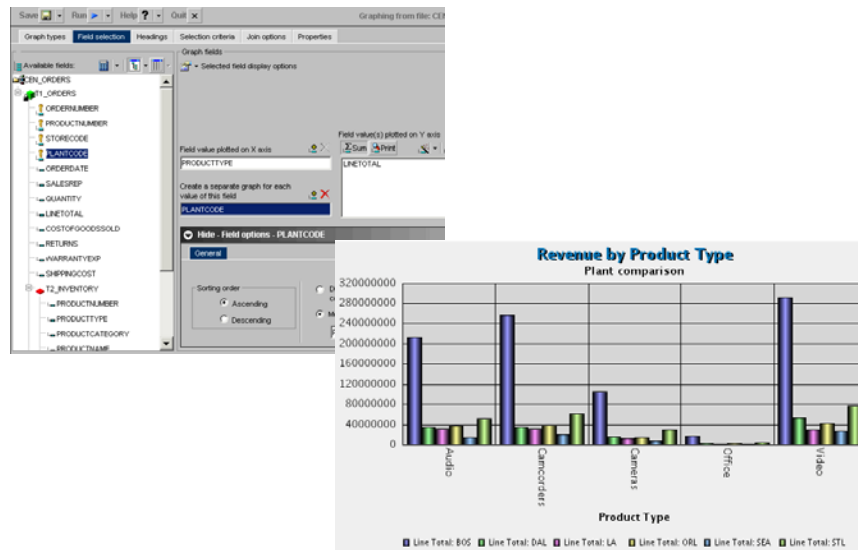
- DB2 Web Query has excellent MS Excel integration
- Dynamically generates fully formatted Excel spreadsheets
 - W/ Drilldowns, Formulas, Summations, Color-coding & more
- Improves end user productivity; reduces errors

The screenshot shows an Excel spreadsheet with the following data:

Product Category	Turns	Same Period 2003	Last Year
Amplifiers/PreAmps/Tuners	13.00	1,350.00	26.98
Audio Systems	26.00	-291.00	-6.46
CD Players and Recorders	20.00	334.00	8.39
DVD Camcorders	29.00	2,531.00	18.53
Digital Cameras			
Digital Camcorders			
Hard			
MP3			
MiniDV Camcorders			
Organizers			
Receivers			
Speakers			
TV			
VCR			
TOTAL			

Callouts in the image include:
 - Formula bar: `=SUM(C7:C21)`
 - Tab: **Formulas/Summations**
 - Cell C22: **Color-Coding**
 - Cell D22: **Hyperlinks/Drilldowns**

Graphing Assistant



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Import Query/400 Definitions

Then Modify with Report Assistant

Store Revenue by Product

Country	Product Type	Product Category	Store Name	Product Type	Line Total
Canada	Audio	Amplifiers/Pro Amps/Tuners	ABC Electronics	Audio	3,304,409.00
		Home Audio Outfitters	Audio		1,415,374.00
		Flamsteed Digital	Audio		54,145.00
		Winning Audio	Audio		262,517.00
		Audio Systems	ABC Electronics	Audio	12,000,000.00
		Home Audio Outfitters	Audio		1,200,104.00
		Flamsteed Digital	Audio		980,872.00
		Winning Audio	Audio		905,209.00
		CD Players and Recorders	ABC Electronics	Audio	4,270,440.00
		Home Audio Outfitters	Audio		737,463.00
		Flamsteed Digital	Audio		195,172.00
		Winning Audio	Audio		307,070.00
		MP3	ABC Electronics	Audio	3,436,481.00
		Home Audio Outfitters	Audio		713,060.00
		Flamsteed Digital	Audio		180,750.00

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Active Reports: Disconnected Support

- Self-contained analytical reports
 - Delivered to users via email or browser
- Users interact with the data on the report *without* being connected to infrastructure
- Intuitive built-in controls
 - Sorting, Filtering, Visualization, Charting, Dynamic Roll-ups
 - Export to HTML, CSV or Excel
 - Export Charts to Word, Excel, or PowerPoint
- Great for mobile sales reps and other users that are not connected or defined to the System i

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Active Reports

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On-Line Analytical Processing (OLAP)

Measures Graph

Date Dimension Product Hierarchy Plant Hierarchy **Store Hierarchy**

COUNTRY REGION STATE CITY Store Name

--All-- --All-- --All-- --All-- --All--

OLAP Run Reset Save Help

France
Germany
Spain
United States

Gross Profit by Product Category

<input type="checkbox"/> Product Type	<input type="checkbox"/> Product Category	<input checked="" type="checkbox"/> Line Total	<input checked="" type="checkbox"/> Cost of Goods Sold	<input checked="" type="checkbox"/> Gross Profit
Audio	Amplifiers/PreAmps/Tuners	\$42,374,428	\$25,739,570	\$42,011,058
	Audio Systems	\$122,345,680	\$82,282,820	\$121,004,220
	CD Players and Recorders	\$53,847,459	\$37,838,460	\$53,200,739
	MP3	\$43,491,588	\$26,438,660	\$43,090,478
	Receivers	\$35,907,113	\$22,998,000	\$35,555,263
	Speakers	\$84,717,053	\$24,680,990	\$84,373,233
Camcorders	Digital Camcorders	\$13,614,953	\$6,512,600	\$13,535,923
	DVD Camcorders	\$379,376,637	\$300,373,350	\$375,144,437
	MiniDV Camcorders	\$51,539,451	\$34,128,360	\$50,991,761
Cameras	Digital Cameras	\$184,103,667	\$133,328,830	\$182,200,567
Office	Handheld and PDA	\$18,533,190	\$14,067,420	\$18,374,880
	Organizers	\$11,712,495	\$4,957,305	\$11,655,940
Video	DVD	\$329,872,045	\$248,768,900	\$326,179,845
	TV	\$168,799,539	\$150,771,700	\$166,628,939
	VCR	\$21,688,621	\$16,270,950	\$21,463,121
TOTAL		\$1,561,923,919	\$1,129,157,915	\$1,545,410,404

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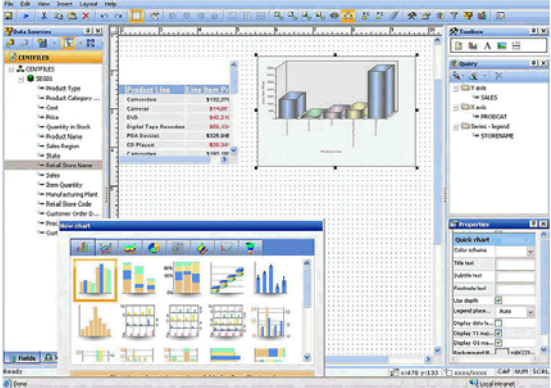
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Power Painter

- Business people designing reports for business people
- Powerful thin-AJAX based Report Design tool
- Build Rich Compound Reports in your business unit
- Simple, flexible access without the need to rely on IT

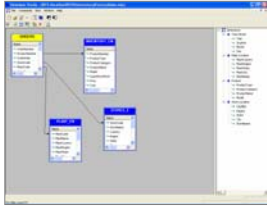


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DB2 Web Query Developer Workbench (optional)

- Excellent Date understanding and added functionality including Date decomposition (Year, Quarter, Month, Day)
- Creation of Hierarchies and Dimension
- Very good awareness of DB2 Foreign Key constraints
- Basic DB2 Web Query metadata also includes: Column Titles, Business Descriptions, Alias, Format, Usage, Pre- and Post-Processing Calculations, hundreds of data manipulation functions
- Federated Queries (from multiple systems/LPARs)



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DB2 Web Query Pricing

- DB2 Web Query (5733-QU2) Base shipped to Query/400 Customers
 - If licensed to QU1 today and on SW Maintenance, then DB2 Web Query is shipped when i5/OS V5R4 is ordered. QU2 can also be ordered directly for customers already on V5R4.
 - A specific number of named users are included, based on processor tier
 - New QU2 SWMA
- DB2 Web Query Quick Start service added to voucher program for Enterprise and i5/OS Editions
- DB2 Web Query offered at a competitive price

Tier	Base Server License	Included Users	Additional Named User	Active Reports*	OLAP Module*
P05	\$1,600	2	\$400	\$400	\$400
P10	\$3,200	4	\$400	\$800	\$800
P20	\$9,600	6	\$400	\$2,400	\$2,400
P30	\$19,200	8	\$400	\$4,800	\$4,800
P40	\$28,800	10	\$400	\$7,200	\$7,200
P50	\$38,400	15	\$400	\$9,600	\$9,600
P60	\$48,000	20	\$400	\$12,000	\$12,000

Developer Workbench
\$995 per user

*Enables all named users to use this feature.

U.S. List Prices are subject to change without notice.

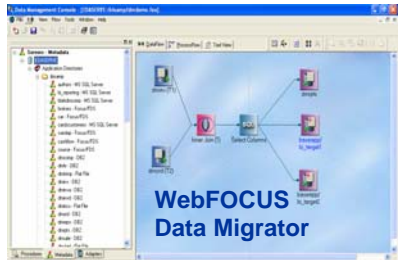
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Additional Features from Information Builders (optional)

- Report Caster
 - Subscribe and publish paradigm
 - Intelligent Bursting
- ERP Adapters
- Data Mining and Cubing API Adapters
 - SPSS' Clementine and ESSBASE/400
- Geographical Information Systems (ESRI) API Adapters
- Extract Transformation Load (ETL)
 - Data Migrator
- Additional RDBMS Adapters



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Report Caster

(optional)

- Automated Delivery Of Information
 - a.k.a. “push” or “casting”
- On Schedule
 - Set by administrator
 - ...Or by user subscription
- On Alert/Event
 - Initiated by a real-time events
- Intelligent bursting
- Output format(s) required
- Delivery Destinations
 - Web Server
 - Database archive (library)
 - eMail
 - Mobile device
 - Printer/Fax

The diagram illustrates the Report Caster workflow. On the left, a stack of report icons is shown with a clock icon above them, indicating scheduled delivery. Below the reports, a red alarm bell icon is labeled 'Danger', with a line graph showing an upward trend, representing real-time event-based delivery. In the center, a document icon is labeled 'XML, CSV, etc.'. On the right, four delivery destinations are shown: a server rack, a mailbox, a mobile PDA device, and a printer/fax machine. Arrows point from the central report document to each of these destinations. The word '(optional)' is written in green above the server rack.

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Quick Start Services

(optional)

- **Getting Started with the New Web Query Tool**

The service offering will help you get started with developing and running reports using the new Web Query tool.


IBM experts will help you install the software, create and import meta data , help you import Query/400 definitions and help you build reports using either the built in reporting features and/or the graphical assistant components. This allows you to do drill downs.

ibm.com/systems/i/editions/services.html

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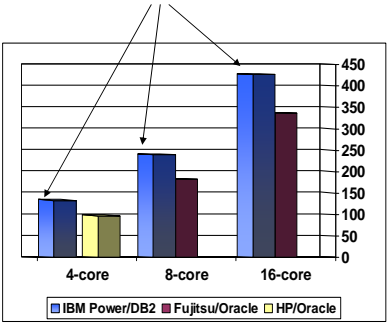
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(included in i5/OS)


DB2 for i5/OS Enablers for BI

- Built into i5/OS
 - SQL Query Engine (SQE)
 - On Demand Performance Center
 - Database Parallelism*
 - Real time statistics
 - Materialized Query Tables
 - Star Join/LPG
 - Query Rewrite
 - Encoded Vector Indexing
 - Remote Journaling (Trickle Feed)
 - Single Level Storage
 - Autonomic Indexes
 - Index Advisor
 - Database Monitors

#1 in SAP BW Query/Hr Benchmark



Configuration	IBM Power/DB2	Fujitsu/Oracle	HP/Oracle
4-core	~150	~100	~100
8-core	~250	~180	~180
16-core	~450	~350	~350

*See detailed certified benchmark results at http://www.sap.com/solutions/benchmark/BW2_results.htm

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(optional)

Building an SQL Optimization Education Plan

- Four day SQL/Query Performance Workshop
 - 4.5 Day Course in Rochester
 - ibm.com/servers/eserver/series/service/igs/db2performance.html
- SQL Optimization Assessment
 - Available for use with Services Vouchers
 - NOT a performance analysis – only an assessment
- Database Analysis Tools from Centerfield Technology
 - <http://www.centerfieldtechnology.com/>
- IBM Global Services – Rochester – Performance Analysis Services
 - Contact: Dan Heithoff – dheithoff@us.ibm.com

Note: Traditional Performance Analysis addresses RESOURCE utilization, but does not address database optimization

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Query Optimization Experiences with DB2 for i5/OS

- SMB Distributor
 - Existing Informix on HP DW
 - 2 hour queries
 - i570 2 CPU LPAR
 - DB2, EVIs, LPG, SMP: **2 hours to 12-49 SECONDS**
- SMB Apparel Manufacturer/Distributor
 - 13 minute queries to 2.5 minutes
 - **25 second queries to 0.5 SECONDS**
- SMB Service Bureau
 - Batch oriented .NET query running on SQL Server, 2 hours
 - Migrated database to DB2 for i5/OS
 - **2 Hours to 6 MINUTES**
- Large Account Retailer
 - ETL with RPG Taking 7 hours
 - SQL, MQTs, EVIs: **7 hours to 8 MINUTES**

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Leveraging High Availability / Disaster Recovery Servers

Production

DB2 Mirrored Image ODS

H/A Backup

Data Warehouse

Queries against Production Databases

Queries against Data Warehouse/Marts

I/T Optimization through Combined H/A and BI Server

- Leverage H/A software to create Operational Data Store (ODS) in near real time
- Utilize ODS as the source for ETL processes into the Data Warehouse
 - Combine with target side remote journaling for ETL efficiencies
- No impact to Production Databases
- Utilize mostly idle capacity of H/A Server for Data Warehouse Workloads
- Optionally mirror Data Warehouse

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Questions & Answers



<http://www-03.ibm.com/systems/i/software/db2/webquery/index.html>

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