



IBM Power Systems™



Beyond Query/400: Leap into Business Intelligence with DB2 Web Query

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IBM DB2 Web Query for System i Powered By Information Builders

• Base Program Product Includes:

- i5/OS Web Reporting Server
- Several Web Based authoring tools
 - RA, GA, Power Painter
- Query/400 (5722-QU1)
 - Web Enable Query/400 Reports
- **BASE PRODUCT OFFERED AS NO CHARGE UPGRADE FROM QU1**
 - Does not include Software Maintenance

Schedule ID	Description	Next Run	Method	Distribution	Action	Owner
S012404110	Revenue report 04/03/2008 09:00AM	None	EMAIL	Internet/DB2 F	swen3	swen3
S012404110	Revenue report 04/03/2008 09:14PM	None	Manual	Manual/DB2 F	Internet/DB2 F	swen3
S012404110	Revenue report 04/03/2008 09:14PM	None	EMAIL	Internet/DB2 F	swen3	swen3
S126100001	NEW Schedule	None	EMAIL	Internet/DB2 F	swen3	swen3
S126100004	Revenue report 04/30/2008 10:20AM	None	EMAIL	Internet/DB2 F	swen3	swen3
S126100001	Date: Revenue 04/05/2008 12:00PM	None	EMAIL	Internet/DB2 F	swen3	swen3
S126100009	Revenue report 04/25/2008 09:00PM	5/7/08 2:08 PM	EMAIL	Internet/DB2 F	swen3	swen3
S126100009	Revenue Order Count 04/25/2008 09:00PM	None	EMAIL	Internet/DB2 F	swen3	swen3
S126100009	Daily schedule of revenue report	5/7/08 2:08 PM	EMAIL	Internet/DB2 F	swen3	swen3
S126100009	Close of business MFS revenue report	None	Manual	Manual/DB2 F	swen3	swen3
S126100009	report 04/03/2008 11:11AM	5/7/08 4:10 PM	EMAIL	Manual	TV	swen3
S126100009	Revenue MFS revenue report	5/7/08 3:03 PM	Manual	Manual/DB2 F	swen3	swen3
S126100009	Revenue Order CDET file	None	EMAIL	Internet/DB2 F	swen3	swen3
S126100009	batchet	None	EMAIL	Internet/DB2 F	swen3	swen3
S126100009	Close of Daily revenue	05/08/08	EMAIL	Internet/DB2 F	swen3	swen3

NEW

• Additional Features

- Run Time User Enablement
- Active Reports (Disconnected Analysis)
- On Line Analytical Processing
 - Requires Meta Data provided with Developer Workbench
- Developer Workbench
 - IT Tool for meta data

- DB2 Web Query Report Broker
 - Automated Report Execution and Distribution
- DB2 Web Query SDK
 - Web Services to integrate reporting functions into applications/portals

<http://www.ibm.com/systems/i/db2/webquery>

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Upgrade into BASE Product from Query/400

- The BASE product:
 - Web enables Query/400
 - Add additional functionality (compared to Query/400) to reports
 - Link Reports by clicking on “hot spot”
 - Add Conditional Styling (“if revenue less than forecast, highlight in RED”)
 - Push data directly from DB2 into Spreadsheets
 - Over 100 charts and graphs
 - Boardroom quality PDF output
 - Access remote DB2 for i data sources
 - Leverages the LATEST in DB2 for IBM i Query Optimization Technology
 - Better performance, better analysis tools
 - Many more functions available for query performance
 - Strategic optimizer



DB2 WQ Leverages Advanced DB2 Query Optimization

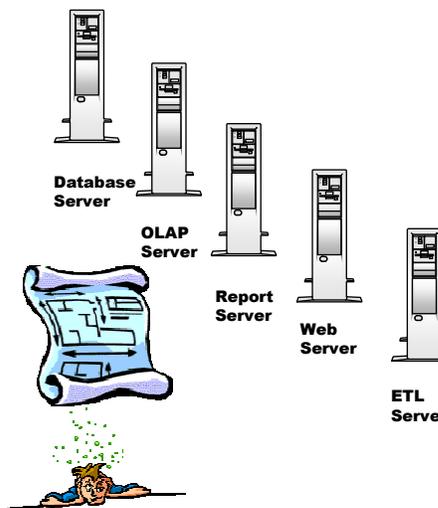
- SQL Query Engine (SQE)
 - Better Performance
 - Self-learning query optimizer
 - Self-adapting query engine
- SQL Plan Cache
 - Real time analysis of Query performance
 - Index advice
- Materialized Query Tables (MQTs)
 - Optimizer “aware” summary tables for extreme performance boost
- Non-SQL interfaces (Query/400, OPNQRYF, QQQQRY API)

DO NOT LEVERAGE ANY OF THE ABOVE FEATURES

<http://www.ibm.com/systems/i/software/db2/awp.html>

What is Different about DB2 Web Query

- Single Server Solution
 - Simpler Software Maintenance
 - Multiple functions in single OS/server
 - OLAP, Report Writer, Web Server, Meta Data, Database
 - Simpler Licensing
- Vertical Scalability
 - Grow without Disruption
- Start Small, Grow Big
 - DB2 Web Query provides FOUNDATION
 - Add additional features per requirements
- Security/Auditability
 - All the data in ONE PLACE
 - Averse to viruses
- DB2 Query Optimization
 - Patented IBM Technology
 - SQE vs. CQE (Query/400)
- Simplified Data Access
 - No Data Replication Required



Run-Time User License Enablement (RTE)

- New Flexible Pricing option
- Can now define a single user license as either a:
 - Report "Author"
 - Can create/edit reports with web based tools
 - Synonymous with a Named User as known today
 - Run Time Only Group of Users
 - Can only run reports
 - Can Group multiple users into a single license
- Significantly reduced prices for scenarios with large set of run-time users



Named User Pricing

Tier	Number of Named Users	Price*
P05	40	\$15,200
P10	80	\$32,000
P20	150	\$57,600

New Run Time Pricing

Tier	Number of "Authors"	Number of Run Time Groups	Price*
P05	4	5	\$6,000
P10	4	10	\$10,400
P20	8	20	\$23,200

US list prices, subject to change without notice

*Assumes upgrade into QU2 from QU1

Education Links

- Getting Started with DB2 Web Query Redbook
 - Tutorial Driven
 - Download Sample Database
 - <http://www.redbooks.ibm.com/abstracts/sg247214.html>
- E-Learning Modules
 - Self paced, downloadable end user training
 - <http://education.informationbuilders.com/edu/courses/elearning/systemi.jsp>
- Classroom Training – <http://ibm.com/services/learning>
 - Getting Started (OD040) and [Implementation Workshop \(OD050\)](#)
- DB2 SQL and Query Performance Workshop
 - Building the DB2 for i Database Engineering skills
 - Four classes scheduled for 2008
 - <http://www-03.ibm.com/systems/i/software/db2/db2performance.html>

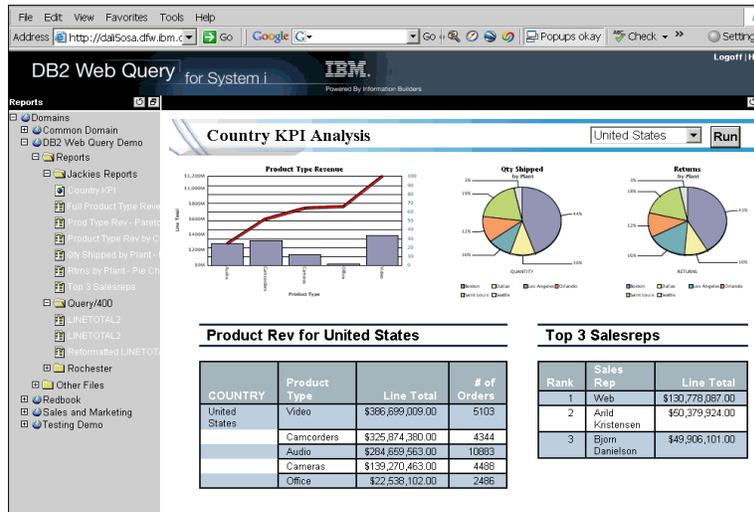


Getting Started

- Review Installation Instructions on “Getting Started” website:
 - <http://www.ibm.com/systems/i/db2/webquery>
- Download an installation pre-req utility
 - **NEW** utilities to check for all DB2 WQ Pre-Reqs
 - IBM pre req checker:
 - <http://www.ibm.com/developerworks/wikis/display/webquery/DB2+Web+Query+for+i+I>nstallation
 - Centerfield Technologies: http://www.centerfieldtechnology.com/wq_icv.asp
 - Having trouble and don't have SWMA? Send e-mail to QU2@us.ibm.com
- Consider *Getting Started* IBM Lab Services
 - This 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 assist you in building reports using either the built in reporting features and/or the graphical assistance components allowing you to do drill downs.
 - ibm.com/systems/i/editions/services.html



Examples



Report Assistant: Drill Down

Revenue by Product Type

Product Type	Line Total
Audio	\$382,683,321.
Camcorders	\$444,531,041.
Cameras	\$184,103,667.
Office	\$30,245,685.

Gross Profit for Audio

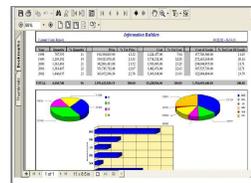
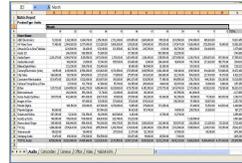
Product Type	Gross Profit Rank	Product Category	Line Total	Cost of Goods Sold	Gross Profit
Audio	1	Audio Systems	\$122,345,680.	\$82,282,820.	\$121,004,220
	2	Speakers	\$84,717,053.	\$24,680,990.	\$84,373,233
	3	CD Players and Recorders	\$53,847,459.	\$37,838,460.	\$53,200,739
	4	MP3	\$43,491,588.	\$26,438,660.	\$43,090,478
	5	Amplifiers/PreAmps/Tuners	\$42,374,428.	\$25,739,570.	\$42,011,058
	6	Receivers	\$35,907,113.	\$22,998,000.	\$35,555,263
*TOTAL PRODUCTTYPE Audio			\$382,683,321.	\$219,978,500.	\$379,234,991
TOTAL			\$382,683,321.	\$219,978,500.	\$379,234,991

Output Reports and Graphs to:

- HTML
- PDF
- Excel 97/2k/2k w formula's
- Active Reports
- Postscript

- DB2 for i table

- Excel 95
- Doc with and without page breaks
- WK1
- DIF
- Lotus
- Tab Delimited
- XML



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

Product Category	2003	Same Period Last Year	
Amplifiers/PreAmps/Tuners	350.00	1,350.00	26.98
Audio Systems	291.33	-291.00	-6.46
CD Players and Recorders	336.00	334.00	8.39
DVD Camcorders	531.00	2,531.00	18.53
DVD Camcorders	949.00		
Digital Cameras	732.00		
Digital Camcorders	697.00		
MP3	0.00	\$10,237.00	1,119.00
MP3	0.00	6.04	\$2,238.00
MP3	13.48	\$9,598.00	1,293.00
MP3	977.00	13,711	\$4,216.00
MP3	164.00	16.25	\$13,315.00
MP3	180.00	6.70	\$2,687.00
MP3	223.00	-6.65	\$2,355.00
TOTAL	298.00	190.93	1,895,176.00

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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/Preamps/Tuners	ABC Electronics	Audio	3,224,489.00
		Home Audio Outfitters	Audio	Audio	1,415,374.00
		Plastite Digitale	Audio	Audio	54,145.00
		Winnipeg Audio	Audio	Audio	262,517.00
		ABC Electronics	Audio	Audio	12,009,899.00
		Home Audio Outfitters	Audio	Audio	1,250,104.00
		Plastite Digitale	Audio	Audio	180,972.00
		Winnipeg Audio	Audio	Audio	895,209.00
		ABC Electronics	Audio	Audio	4,270,449.00
		Home Audio Outfitters	Audio	Audio	737,463.00
		Plastite Digitale	Audio	Audio	195,172.00
		Winnipeg Audio	Audio	Audio	397,070.00
		ABC Electronics	Audio	Audio	3,438,981.00
		Home Audio Outfitters	Audio	Audio	703,068.00
		Plastite Digitale	Audio	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 w/o 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



Active Reports

WebFOCUS Active Report - Mozilla Firefox

File Edit View History Bookmarks Tools Help

file:///C:/Documents%20and%20Settings/hippa/Desktop/PHL%202006-07%20Data%20-%20WebFOCUS%20Active%20Report.htm

Information Builders

Adapter Manager - Configuration (base) WebFOCUS Active Report

Filter Selection

SALARY Less than \$4,000,000

PPG Less than 10

G Greater than 15

Operator: AND Add Condition Filter HighLight Clear All

NHL Player Statistics Summary

Player	Team Name	R	P	PTS	G	A	GP	SALARY	PIM	+	-	PPG	PPA	SHG	SHA	GW	GT	SOG	F
Sergei Brylin	New Jersey Devils	39	C	40	16	24	82	\$1,520,000	37	7		8	7	0	1	2	0	0	97
Bryan Smolenski	Vancouver	37	C	44	19	25	82	\$1,520,000	37	7		6	6	4	1	3	0	0	163
Mike Fisher	Ottawa Senators	50	C	48	22	26	68	\$1,500,000	41	15		7	5	2	2	3	0	0	193
Eric Delanger	Atlanta Thrashers	37	C	35	17	18	80	\$1,300,000	26	-2		4	2	0	0	1	0	0	149
Ryan Malone	Pittsburg Penguins	31	LW	31	16	15	64	\$1,300,000	71	4		1	4	1	1	0	0	0	125
Sean Avery	New York Rangers	29	LW	48	18	30	84	\$1,100,000	174	1		2	13	1	1	2	0	0	249
Trant Hunter	New York Islanders	24	RW	35	20	15	77	\$1,000,000	22	5		5	4	1	1	2	0	0	168
Alexander Radulov	Nashville Predators	49	RW	37	18	19	64	\$984,200	26	19		5	6	0	0	4	0	0	96
Travis Zajac	New Jersey Devils	46	C	42	17	25	80	\$984,200	16	1		6	6	0	0	2	0	0	134
Antoine Vermette	Ottawa Senators	37	C	39	19	20	77	\$925,000	52	-2		2	3	3	1	2	0	0	151
Mikko Koski	Minnesota Wild	30	C	54	20	34	82	\$902,000	58	6		9	10	2	1	2	0	0	162
Viktor Kozlov	New York Islanders	35	C	51	25	26	81	\$865,000	26	12		5	7	0	1	4	0	0	165
Jordan Staal	Pittsburg Penguins	37	C	42	29	13	81	\$850,000	24	16		4	2	7	2	4	0	0	131
Jason Pominville	Buffalo Sabres	87	RW	68	34	34	82	\$800,000	30	25		2	11	2	2	5	0	0	212
Matthew Lombard	Calgary Flames	27	C	46	20	26	80	\$800,000	48	10		5	8	-4	1	5	0	0	176
Shea Weber	Nashville Predators	34	D	40	17	23	79	\$735,000	60	13		6	8	0	1	2	0	0	152
Zach Parise	New Jersey Devils	75	LW	62	31	31	82	\$703,000	30	-3		9	13	0	0	7	0	0	247
Taylor Pyatt	Vancouver	46	LW	37	23	14	76	\$700,000	42	5		9	2	0	0	4	0	0	150
Corey Perry	Anaheim Mighty Ducks	43	RW	44	17	27	82	\$684,000	55	12		4	16	0	0	3	0	0	154
Niklas Hagman	Dallas Stars	26	LW	29	17	12	82	\$675,000	34	3		2	3	1	0	2	0	0	152
Daniel Cleary	Detroit Red Wings	58	RW	40	20	20	71	\$650,000	24	6		6	2	2	1	5	0	0	135
Derek Roy	Buffalo Sabres	72	C	63	21	42	75	\$627,000	60	37		6	8	1	1	3	0	0	130

POS: Position, PTS: Total Points for Season, GP: Games Played, PIM: Penalty Minutes, PPG/PPA: Powerplay Goals/Assists, SHG/SHA: Shorthanded Goals/Assists, GW/GT: Game Winning/Teamy Goals, SOG: Shots on Goal

*Rating calculated as Even Strength Goal and Assists, relative to players total games played, Penalty Minutes, and Team Standings

49 of 446 records (10.99%), Page 2 of 3

Done

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On-Line Analytical Processing (OLAP)

Measures | Graph | Date Dimension | Product Hierarchy | Plant Hierarchy | Store Hierarchy

COUNTRY: --All-- (dropdown menu open showing: France, Germany, Spain, United States)
 REGION: --All-- | STATE: --All-- | CITY: --All-- | Store Name: --All--

OLAP | Run | Reset | Save | Help

Gross Profit by Product Category

Product Type	Product Category	Line Total	Cost of Goods Sold	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	\$37,836,460	\$53,200,739
	MP3	\$43,491,588	\$26,438,660	\$43,030,478
	Receivers	\$35,907,113	\$22,998,000	\$35,555,263
	Speakers	\$64,717,053	\$24,680,990	\$64,373,233
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
Video	Organizers	\$11,712,495	\$4,957,305	\$11,655,940
	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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Power Painter

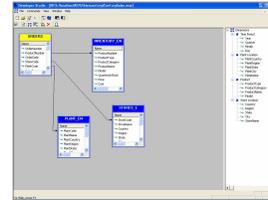
- Business people designing reports for business people
- Powerful thin-AJAX based Report Design tool
- Build Rich Compound Reports in your business unit
- Simple, flexible access without the need to rely on IT

The screenshot shows the Power Painter application window. On the left is a 'COMPONENTS' tree with categories like SEGS, Product Type, Product Category, Cost, Price, Quantity in Stock, Product Name, Sales Region, State, Retail Store Name, Sales, Item Quantity, Manufacturing Plant, Retail Store Code, Customer Order D., and Item. The main canvas displays a data table with columns 'Product Line' and 'Line Total', and a 3D bar chart. On the right, there are panels for 'query' (listing SALES, PRODUCT, STORENAME) and 'Properties' (with fields for Color scheme, Title text, Subtitle text, Font color, Use depth, Legend placement, Display data, Display TO, Display ON, and Background color).

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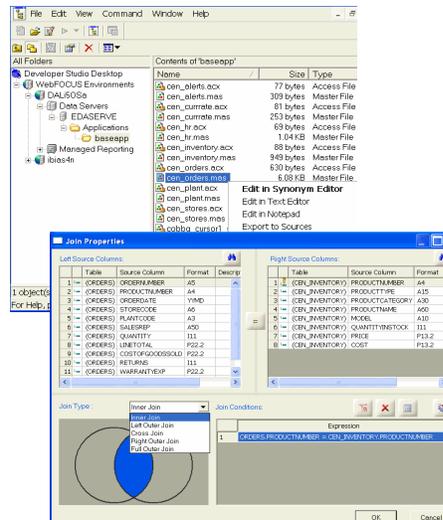
DB2 Web Query Developer Workbench

- 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



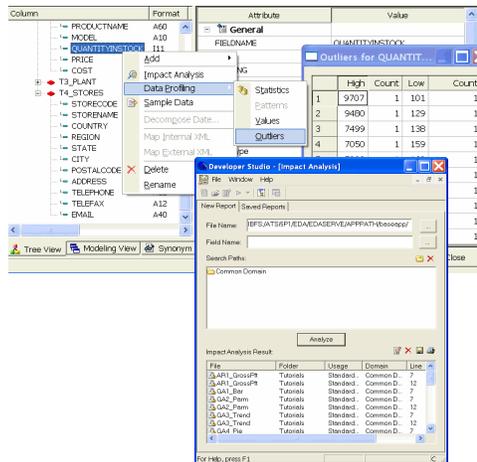
DW Synonym (meta data) Editor

- Standardize Field/Column Formats
 - Ex, use commas, set currency symbol, suppress leading zeros
- Standardize/Decompose Date Fields
 - Ex: Integer defined as MMDDYYYY
- Create Filters
 - Ex: Define a set of countries as “Europe”
- Define JOINS
- Create Business Views
 - Organize Columns/fields for easier report development



DW Administrative Tooling

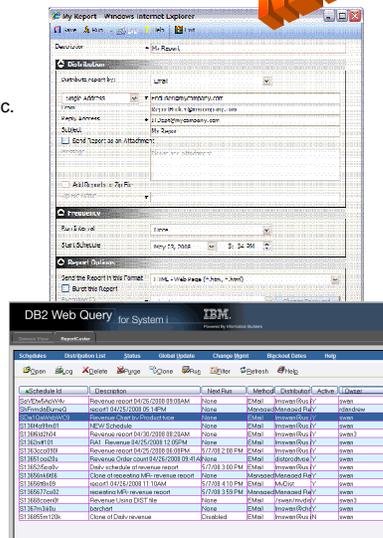
- Impact Analysis
 - Evaluation the impact of table layout change on reports
- Data Profiling
 - By column or whole table
 - Pattern count, outliers
 - Identifies Avg, Min/Max
 - Number of distinct Values
 - % of Nulls
- SQL Wizard
 - Import SQL
 - Create/Edit SQL
 - Define as input to RA or GA



DB2 Web Query Report Broker – 5733-QU3



- Automated Delivery Of Information
 - On Scheduled Basis
 - Through Admin GUI
 - Daily, Weekly, Specific Days, exclude rules, etc.
 - On Event Basis
 - Some customization required
- Intelligent bursting
 - Ex: Regional Sales Report
- Additional output formats for batch reporting
 - (HTML, PDF, Excel, Active HTML)
- Delivery Destinations
 - E-mail
 - Printer
 - Save the reports for later viewing
- Notify Function
 - Send notification when report is complete or fails
 - Report Logging
- Requires DB2 Web Query BASE Product to be installed

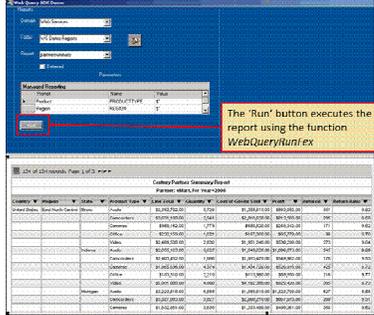


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DB2 Web Query Software Development Kit: 5733-QU4

NEW

- A set of Web Services that allow invocation of DB2 Web Query functions from within an application
 - Enables ISV Developers to access and integrate Web Query Content into any web application
- Web Services are programming language independent
 - The foundation for SOA
 - C, C++, VB.NET, Java, etc.
- Requires the BASE product to be installed (run time and development)
 - Developer Workbench also a development requirement
 - Run Time User Enablement required for Run Time
- Simple to Deliver powerful BI content
 - Self service parameterized reports
 - Active reports and OLAP



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Building a Reporting Repository

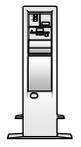
ERP

IBM i
LPAR
2 CPUs

Data Mart or DW

IBM i
2 CPUs





**MS SQLServer
Or Other**



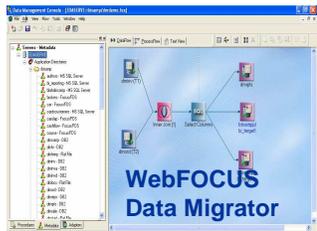
ETL Tool or Remote Journal with Transformation Server

Information Builder's Data Migrator

- IBM i Extract/Transform/Load
- GUI to define mappings
- Scheduler
- Can pull data from MANY different data sources
 - Not just DB2

Other Options

- Partner ETL Tools (e.g., Coglin Mill's Rodin)
- Remote Journaling/IBM's (DataMirror) Transformation Server



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Recent Articles

- How DB2 Web Query will help your Shop
 - <http://www.mcpressonline.com/april-14-2008-vol-3-issue-7/database/db2/how-will-ibm-db2-web-query-for-system-i-benefit-your-shop.html>
- DB2 Web Query Directions
 - <http://www.ibm.systemsmag.com/i5/march08/features/19668p1.aspx>
- How Run Time User Enablement Works
 - http://www.ibm.com/systems/i/software/db2/pdf/DB2_Web_Query_Run_Time_User_Enablement.pdf
- Using SQL Views and Stored Procedures to control Security with DB2 Web Query
 - http://www-304.ibm.com/jct09002c/partnerworld/wps/servlet/ContentHandler/whitepaper/i5os/db2_sql/security
- DB2 Web Query Drill Downs
 - <http://www.mcpressonline.com/db2/techtip-know-the-drill.html>
- Maximizing DB2 Web Query with SQL Query Engine
 - http://www.ibm.com/partnerworld/wps/whitepaper/i5os/db2_sql/security

Questions & Answers

