DB2 for i:
7.2 Overview

On April 28, 2014, IBM announced IBM i 7.2, a new version of the popular operating system that includes DB2 for i. This version of DB2 for i adds additional capabilities to:

- Enhance protection of data through access rules and masking techniques
- Extend legacy application code by modernizing DB2 for i usage
- Improve performance of accessing and managing data in DB2 for i
- Improve productivity of developers with powerful SQL enhancements
- Improve compatibility with other database management systems making porting and cross DBMS development easier

Secure DB2 Data

DB2 for i 7.2 adds several new security related enhancements. Row and column-level security is the concept of providing an additional layer of security within a table or physical file. The new Row and Column Access Control (RCAC) support provides this more granular level of data security to make it easier to manage and govern IT best practices for securing data.

Row permissions can be defined to control what rows can be accessed based on the values within a row and the credentials of the user accessing the data. Column masks can be defined to ensure that only users with a need to know can access sensitive values such as a credit card number while unauthorized users are returned a masked version of the sensitive data.

Using security function roles, additional separation of duties can be configured to restrict security users from both controlling DB2 security and accessing DB2 data.

Extending the life of your legacy applications through Database Modernization

As with many updates to DB2 for i, version 7.2 continues to add additional functional enhancements that provide programmer productivity, portability through industry or de-facto standards support, and enhanced flexibility and extensibility for both new and existing applications. Many of these enhancements extend the life of legacy applications through modernized use of DB2 for i with minimal impact to those applications.

If you're struggling to architect and deploy SQL functions, procedures and triggers, DB2 for i 7.2 has lots of new capabilities to help you. The improvements make it easier to develop and deploy complex business logic in a manner that can be easily maintained and extended over time. Some of these enhancements include:

- Combine multiple trigger actions in a single trigger
- Autonomous stored procedures that can be easily integrated with existing applications
- Enhanced debug capabilities through single step debug and variable evaluation
- Simplified management of SQL Routines through CL commands

Developers building applications using ADO.NET can leverage entity framework and system naming support as well as support for Visual Studio 2013 with DB2 Connect 10.5.

To read more about database modernization, refer to the white paper *DDS and SQL – the winning combination for DB2 for i*.

Usability and Self Managing Features

Continuing on the tradition of strong management capabilities built into DB2, version 7.2 adds ven more. System i Navigator, the administrative graphical user interface for managing DB2 as well as the entire system, adds improvements in comparing a before and after set of database monitor collections. Enhanced reports include new charts and graphs to visualize DB2 status or performance information. Improvements in the SQL Generation functions provide more flexibility in converting DDS objects to SQL.

Performance Enhancements

Many enhancements in performance will apply to both traditional operational workloads but also existing or emerging analytical workloads such as data warehouses or business intelligence solutions.

New "in memory" options and automatic movement of objects to Solid State Disk (SSD) units can significantly improve data access without user interaction. Enhanced support for managing the SQL plan cache makes life easier for the database administrator by providing more flexibility in managing the plan cache size after an IPL and in real time.

Big Data gets a boost with the expansion of a single index to 1.7 Terabytes, adding to DB2 for i's many leadership positions in database limits. Monitoring capacities in relation to DB2 limits becomes easier as well with a new System Limits function within Navigator's Health Center.

Support for Analytical Applications

The popular DB2 Web Query for i product has also been enhanced (with support also available for the IBM i 6.1 and 7.1 releases) to add additional data visualizations including heat maps, bubble charts, and geographic maps that you represent data values based on a point on the map. Single sign on, a new "run time environment" option, and the application extension to allow you to easily integrate DB2 Web Query reporting functions into existing or customized applications are just some of the new enhancements. The updated DB2 Web Query Redbook has been finalized and provides a set of tutorials to get you up and running fast with this SQL-based reporting and business intelligence tool.

To view the latest enhancements to DB2 Web Query or installation instructions, refer to the DB2 Web Query wiki or send an email to QU2@us.ibm.com.

New Service Offerings from the DB2 for i Center of Excellence

The IBM DB2 for i Center of Excellence offers DB2 expertise to assist customers in a variety of ways. The SQL/Database Performance Assessment offering is one of the more popular ways to find out what you don't know about your usage of DB2 and how you can improve management and performance. The SQL Performance Workshop is a classroom-style training session to get you trained up!

The Database Modernization training and consulting services are designed to get you on your way to higher performance, more flexible use of DB2 that extend the life of your legacy applications.

The DB2 Web Query Getting Started service provides training and hand holding to get your implementation up and going leveraging best practices from years of implementation experience. Modernize your Query/400 environment with the recently added modernization service that can move you light years beyond the current Query/400 quagmire.

A new Security and Compliance Reporting solution provides dashboards with drill downs to allow your security officer to get out of the data gathering business. The solution monitors over 90 security related definitions in your system(s).

If you're interested in any of these services, send an email to QU2@us.ibm.com.

More to Come!

IBM will continue to deliver additional DB2 capabilities for the IBM i 7.2 release after GA using the Technology Refresh delivery vehicle. Visit the DB2 for i Technology Updates Wiki on a regular basis to stay current with the latest DB2 enhancements.

Additional Information on DB2 for i:

DB2 for i 7.2 Technical Overview:
https://ibm.biz/BdRC6A

DB2 for i Home Page:
http://www.ibm.com/systems/i/db2

DB2 for i Technolgy Updates Wiki:
http://ibm.com/developerworks/ibmi/techupdates/db2

DB2 Web Query Home Page:
http://www.ibm.com/systems/i/db2/webquery