

Db2 for i & SQL

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IBM i @ 35 – Let's Celebrate



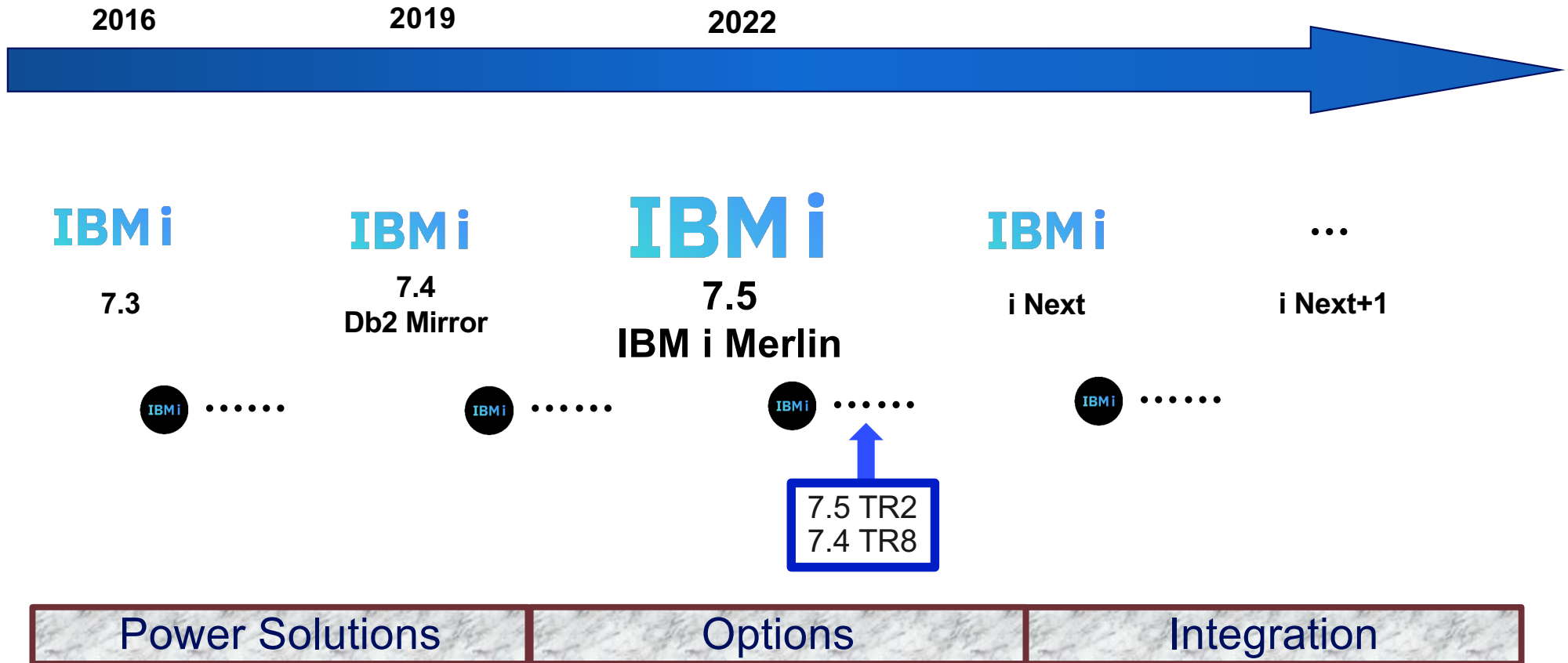
IBM i @ 35 – Let's Celebrate



IBM i Roadmap



Let's
Create



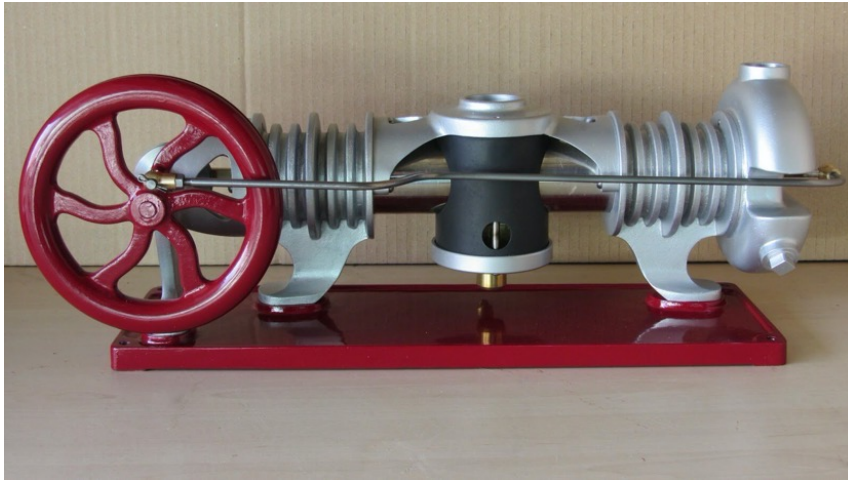
** All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice and represent goals and objectives only.

** Arrows indicate "ongoing status" and do not imply any specific dates.

SQL Query Engine (SQE)

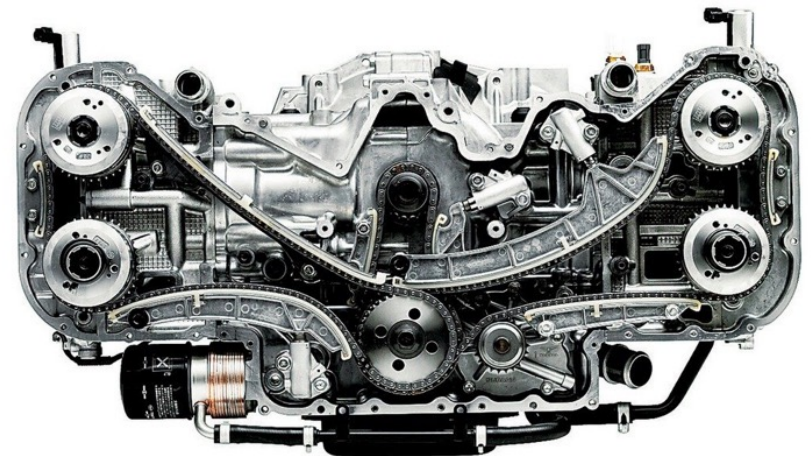


Let's
Create



Classic Query Engine (CQE)

SQL Query Engine (SQE)



SQL Query Engine (SQE)



Let's
Create

2016

2019

2022

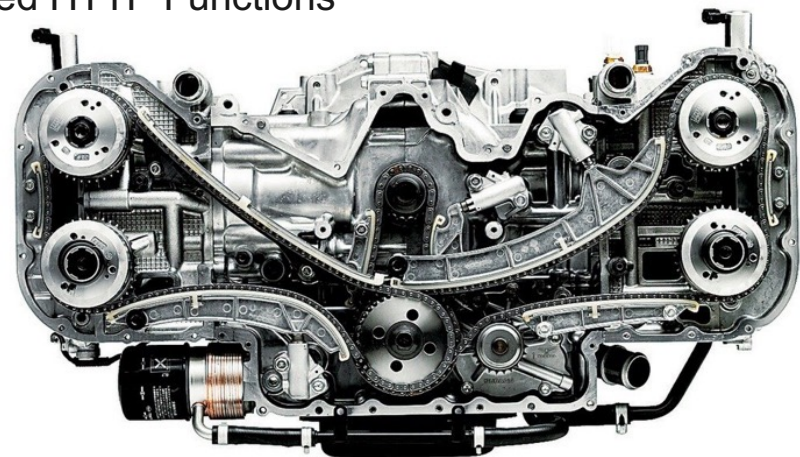
IBM i 7.3

IBM i 7.4

IBM i 7.5

- System-period Temporal tables
 - OLAP specifications Within partitioning windows
 - Generated Columns for Auditing Row
 - Attach and Detach Partition
 - SYSTOOLS-based HTTP Functions
 - Authority Collection by User
 - SQL Plan Cache Procedures
- INTERPRET
 - HASH
 - Authority Collection by Object
 - Replication Override
 - Watson Geospatial
 - Db2 Mirror
- Boolean data type, scalar functions, predicates
 - Boolean constants, assignments, comparisons
 - JSON Boolean support
 - XML Boolean support
 - Restrict On Drop
 - TRY_CAST
 - QSYS2-based HTTP Functions

SQL Query Engine (SQE)



IBM i Access Client Solutions

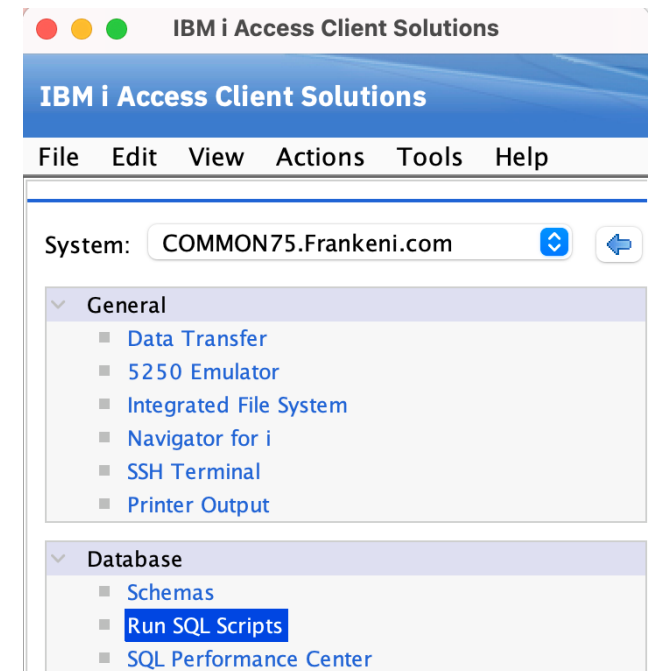


Let's
Create

- The **best** IFS navigator
- The **best** Spooled file tool
- The **best** 5250 emulator
- The **best** Db2 for i tools
- The **best** IDE for SQL



Best of breed tools for all IBM i users



IBM i Access Client Solutions (1.1.9.2) download:
https://ibm.biz/IBMi_ACS

SQL Built-in Functions



Let's
Create

- May 2023 – More HTTP functions based in QSYS2
ADD_DAYS, ADD_HOURS, ADD_MINUTES, ADD_SECONDS, & ADD_YEARS
- November 2022 – FIRST_DAY, JSON_UPDATE, & TIMESTAMPDIFF_BIG
- May 2022 – TRY_CAST
- October 2021 – New HTTP functions based in QSYS2
- July 2020 – INTERPRET built-in function &
HASH_ROW built-in function
- January 2020 – HASH Built-in functions

IBM i 7.4 and
up

IBM i 7.3 and
up

IBM i 7.4 and
up

IBM Navigator for i

Modern UI for Accessing, Monitoring,
and Managing the IBM i

Built with Angular & leverages
IBM i (SQL) Services

Welcome to IBM Navigator for i



User Name:

Password:

Log in



common75
Active  

IBM i:	7.5
TR Level:	1
CPU %:	0.09
Active jobs:	384
System ASP %:	89.79 



Let's
Create

<https://www.ibm.com/support/pages/node/6483299>

IBM i (SQL) Services

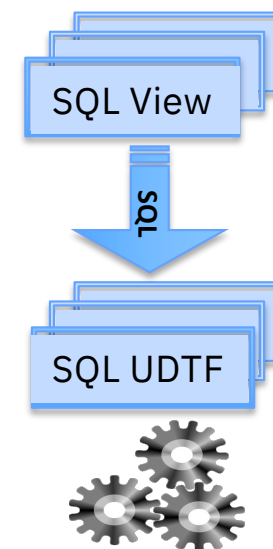


Let's
Create

IBM i Services (2023)

- New and enhanced services delivered twice per year

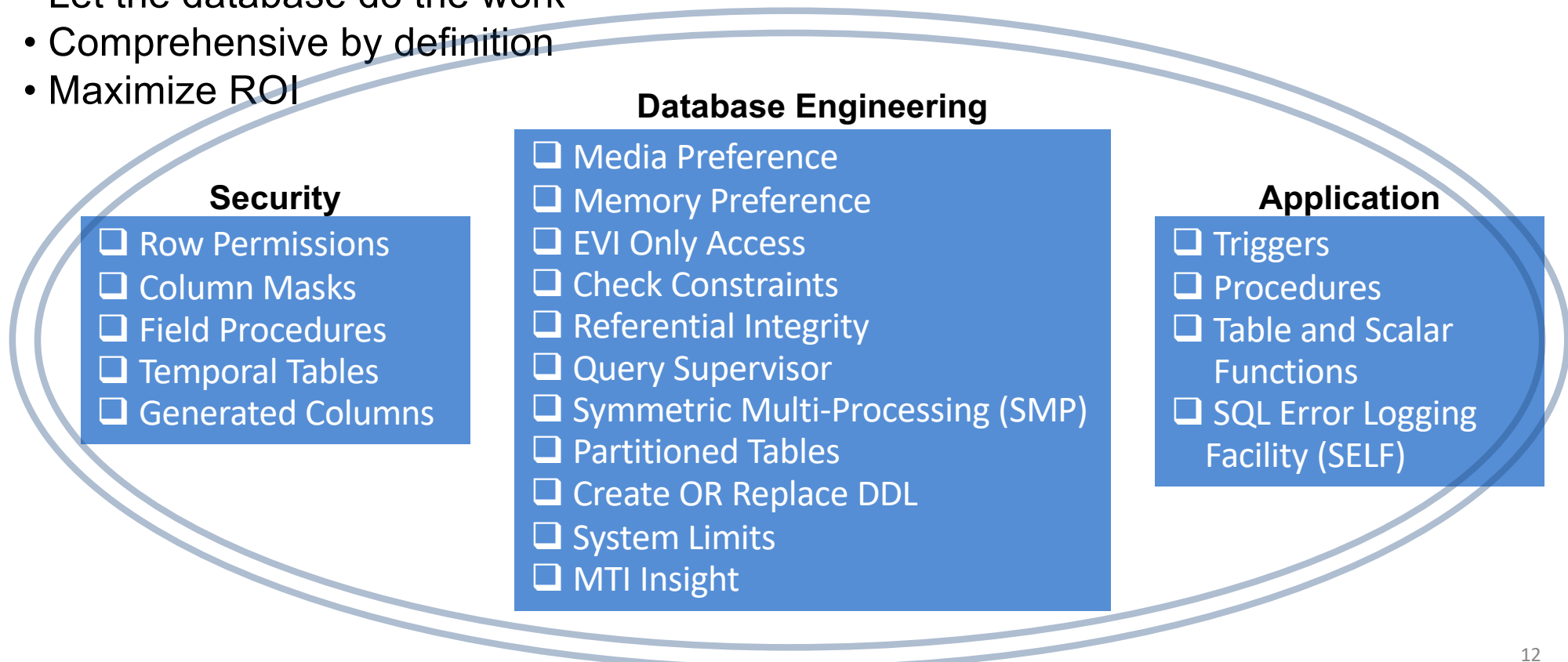
SERVICE_CATEGORY	SERVICE_CATEGORY_COUNT
JOURNAL	43
APPLICATION	37
WORK MANAGEMENT	31
MIRROR-PRODUCT	26
COMMUNICATION	21
SECURITY	19
DATABASE-UTILITY	17
STORAGE	17
DATABASE-PLAN CACHE	14
DATABASE-PERFORMANCE	10
IFS	8
MIRROR-COMMUNICATION	8
MIRROR-REPLICATION	8
SPOOL	8
DATABASE-APPLICATION	7
MESSAGE HANDLING	7
MIRROR-SERVICEABILITY	7
PTF	7
MIRROR-RECLONE	6
BACKUP AND RECOVERY	5
MIRROR-RESYNCHRONIZATION	5
LIBRARIAN	4
SYSTEM HEALTH	4
JAVA	3
PRODUCT	3
CONFIGURATION	2
PERFORMANCE	1



<https://www.ibm.com/support/pages/node/1119123>

Db2 for i - Data-Centric Features

- Let the database do the work
- Comprehensive by definition
- Maximize ROI



SQL Tutor



Let's
Create



50+ Videos



GitHub Gist

112 Gists

<https://www.ibm.com/support/pages/ibm-i-tutorials-demos-and-sql-examples-0>

SQL – IBM Power Community



Let's
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SQL

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The Discussion forums are a great venue to ask questions of your peers and IBM subject matter experts to share best each other. Make sure to read the [Community Netiquette](#) before posting.

Search Discussions

Term / Keyword / Phrase

Most Recently Updated

calling a stored procedure with no parms
[Christian Jorgensen](#)
Original post by [David Strawn](#)
7 replies

<https://community.ibm.com/community/user/power/communities/community-home/digestviewer?CommunityKey=3fcb1d91-6b8b-42a1-aa05-26e106041399>

Client Special Registers

Db2 for i methods for using Client Special Register values

Brand your applications and workloads using:

1. Set Client Information (SQLESETI) API
2. SQL Call Level Interface (SQL CLI) – SQLSetConnectAttr()
3. ODBC – SQLSetConnectAttr()
4. JDBC - setClientInfo() connection method
5. SYSPROC.WLM_SET_CLIENT_INFO() procedure

Find out more here:

i Can blog thread – <https://techchannel.com/SMB/02/2019/client-special-registers>

Client user	scottforstie
Client accounting string	Mac OS X;SSL=false;admin_user=false
Client application	IBM i Access Client Solutions – Run SQL Scripts
Client program	file:/usr/local/ibmiaccess/acsbundle.jar Version: 1.1.9.2 Build id: 3131 2023-05-30 22:49:15
Client workstation	10.236.126.77

IBM i Technology Refreshes (TRs)



Let's
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Enhancement Landing Pages

IBM i 7.5

[TR2 - TR1 - Base Enhancements](#)

IBM i 7.4

[TR8 - TR7 - TR6 - TR5 - TR4 - TR3 - TR2 - TR1 - Base Enhancements](#)

IBM i 7.3

[TR13 - TR12 - TR11 - TR10 - TR9 - TR8 - TR7 - TR6 - TR5 - TR4 - TR3 - TR2 - TR1 - Base Enhancements](#)

IBM i 7.2

[TR9 - TR8 - TR7 - TR6 - TR5 - TR4 - TR3 - TR2 - TR1 - Base Enhancements](#)

[IBM i Memo to Users \(MTU\) updates](#)

[IBM i - Technical Articles](#)

[Db2 for i SQL Tutor](#)

<https://www.ibm.com/support/pages/node/1119129/>

RESTful services in Db2



Let's
Create

- **SYSTOOLS** - based since IBM i 7.1
 - Relies upon Java
- **QSYS2** - based since IBM i 7.3
 - The best form factor



```
select * from json_table(QSYS2.HTTP_GET(  
  'https://icanhazdadjoke.com/',  
  '{"header": "Accept, application/json", "sslTolerate": "true"}'),  
  'lax $' columns("joke" varchar(200) ccsid 1208));
```

RESTful services in Db2



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Q: Did you hear about the runner who was criticized?

RESTful services in Db2



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Q: Did you hear about the runner who was criticized?

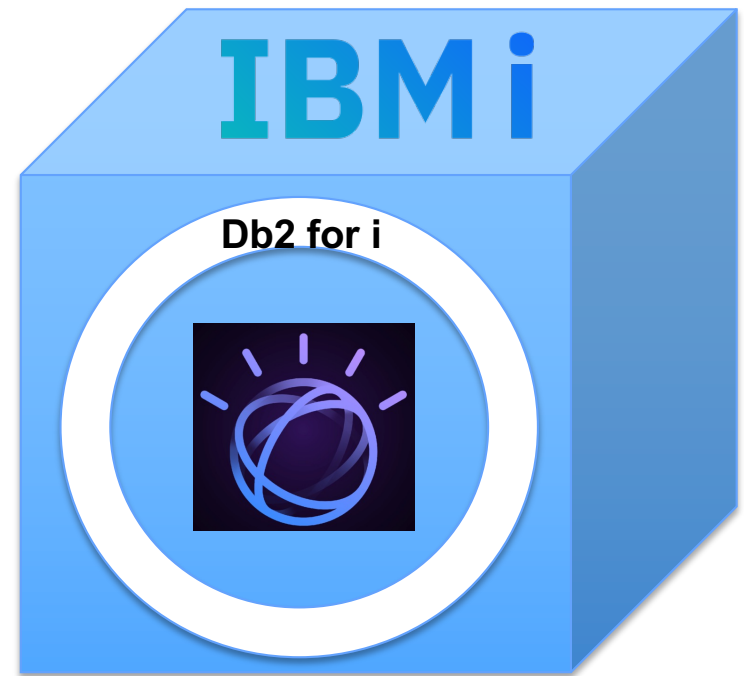
A: He just took it in stride

Geospatial Analytics with IBM Watson



Let's
Create

- **IBM Watson is integrated into Db2 for i**
 - No web service calls, no reaching outside
 - No data moving off IBM i
 - No extra charge
- **Access Watson via SQL**
 - QSYS2 distinct types
 - QSYS2 scalar functions and table functions
 - QSYS2 catalogs
- **New [Geospatial Analytics](#) book**
- **IBM i 7.5 [SF99950](#) – Level 3 ...or... IBM i 7.4 [SF99704](#) – Level 23**



Authority Collection

Authority Collection is an IBM patented ([US9928365B1](#)) technology that allows IBM i clients to capture **runtime authority checking** detail for a user or an object

By User:

Capture detail related to runtime authority for specific user(s)



By Object:

Capture detail related to runtime authority for specific object(s)

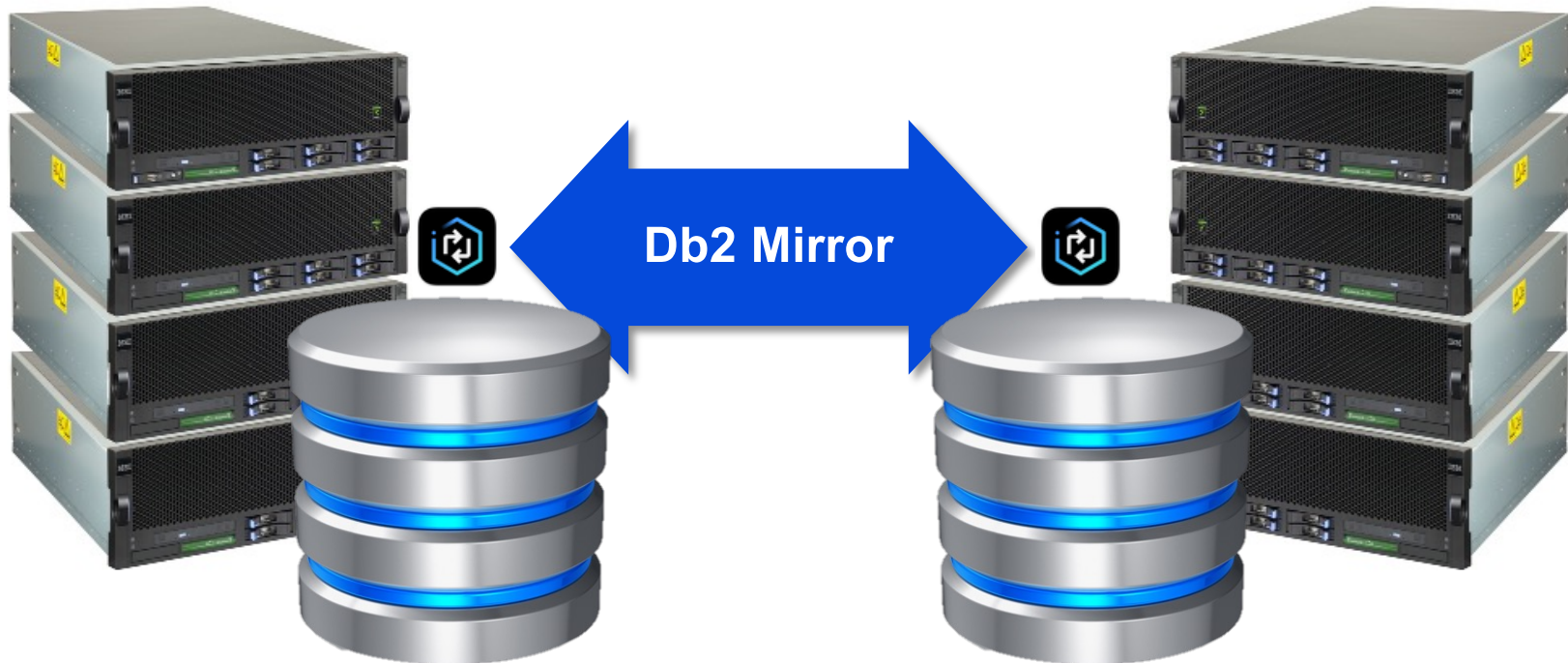


IBM Db2 Mirror for i



Let's
Create

- **Enables Continuous Availability**
- **Application Availability**
- **Business Continuity**

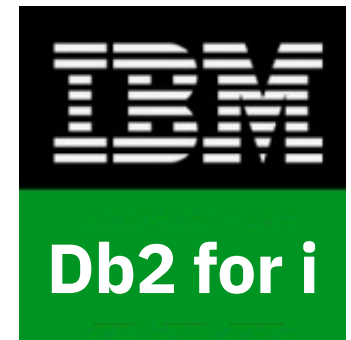


Db2 for i – Guided Tours



Tour of Db2 for i:

- What is Db2 for i?
- Db2 for i and Beyond
- SQL: Not Just for Data
- Db2 for i – Office Hours
- Db2 for i Analytics
- Continuous availability of Db2 for i



Where are these presentations found: [IBM i Guided Tours](#) (2022)



IBM i – Guided Tours



Let's
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The beat goes on!

Ask the IBM i CTO and the Architects Anything

9:00 AM – 10:00 AM | Jun 7, 2023 (UTC-05:00) Carmelita Ruvalcaba

Introduction to RDi (Rational Developer for i)

9:00 AM – 10:00 AM | Jun 14, 2023 (UTC-05:00) Carmelita Ruvalcaba

IBM i turns 35 – Let's Celebrate!

9:00 AM – 10:00 AM | Jun 21, 2023 (UTC-05:00) Carmelita Ruvalcaba

IBM i Security and Db2 for i

9:00 AM – 10:00 AM | Jun 28, 2023 (UTC-05:00) Carmelita Ruvalcaba

How you register for these Guided Tours: [IBM i Guided Tours \(2023\)](#)

How you can access any Guided Tour Replay:

<https://ibm.box.com/v/IBM-i-Guided-Tours-2023-REPLAY>

Thank You!

IBM



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