

Db2 for z/OS

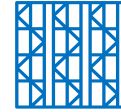
Key Updates and Directions



Akiko Hoshikawa
Db2 for z/OS Development
IBM



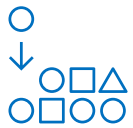
IBM Db2 for z/OS Technical Strategy



Extend **foundational strengths** in availability, scalability, performance, connectivity and resiliency



Extend **application** and multi-tenancy capability



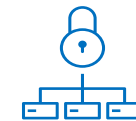
Expand **business insights** through in-database AI



Simplify and optimize operational efficiency utilizing AI based automation as needed



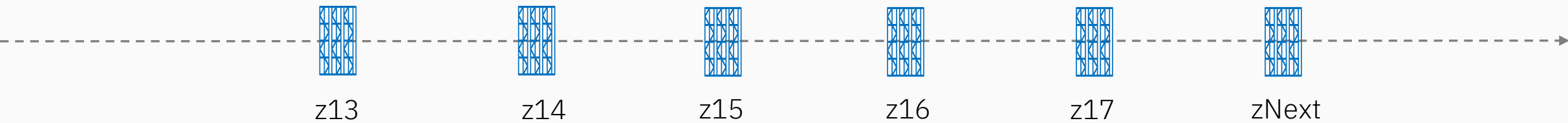
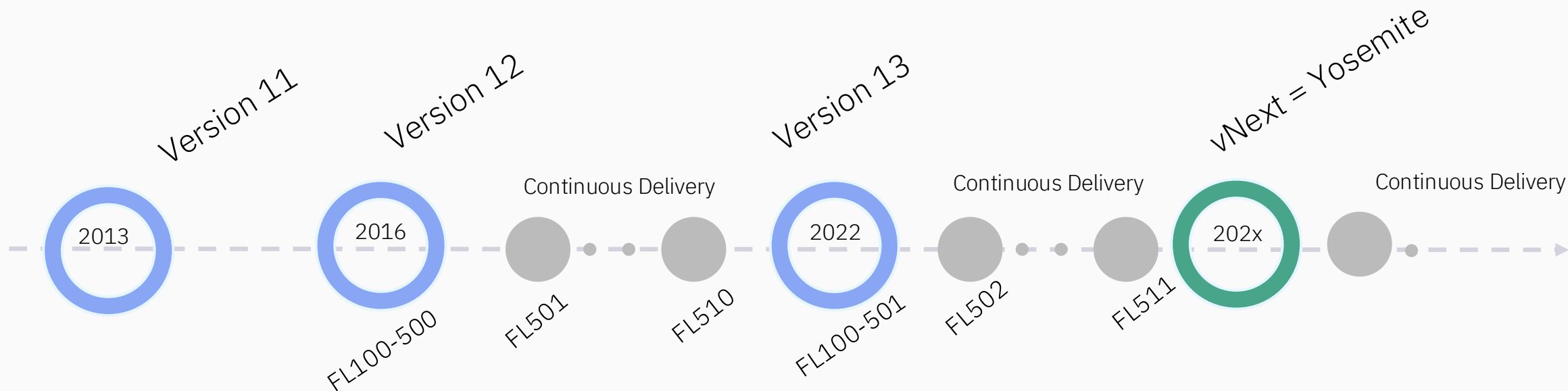
Promote and **modernize** application development and DevOps methodology



Provide **secure access** to data whenever and wherever it is needed

Db2 for z/OS

Versions and Continuous Delivery



AGENDA

1

Continuous Delivery

Db2 13 recent key updates with and without function level

2

Preparing for Yosemite

Foundation for future

3

Yosemite : version next

Theme and features candidates

4

Consumable Db2 with AI Assist

Database Assistant and Db2 AI for z/OS

SQL Data Insights Pro introduction

Note:

SQL Data Insights and Pro (Wed:Richard/Akiko)

Data Integration (Wed:Cuneyt)



Continuous Delivery in Db2 13

Db2 13 key updates with and without function level

Db2 13 Continuous Innovation – Function Levels

Function Level

- Functions impacts to application compatibility
- Functions requires at all the member in data sharing

Jun 2022

FL100, FL500, FL501

- Industry-first AI-infused insights into business data
- Enhanced operational flexibility with no application outages
- Improved interoperability with cloud applications
- Streamlined version upgrade with no application outages
- And more...

Oct 2022

FL502

- Statement-level dependency phase 1
- Db2-controlled sysplex workload balancing

Apr 2023

FL503

- Default when adding row change timestamp columns
- Accelerator-only support for >32K in-list
- OPTIMIZE FOR n ROWS for SELECT INTO

Oct 2023

FL504

- Object-level utility history
- Minimize package invalidation impact
- SQL Data Insights outlier detection
- More trace OP buffer destinations
- ORDER BY fullselect with LISTAGG

Apr 2024

FL505

- RACF Identity Token(IDT) support
- Scalability for trace numbers
- Catalog security improvement
- INTERPRET scalar function
- Trace destination ZAI

Oct 2024

FL506

- INLIST performance
- Column masking improvement
- >32 traces
- Multi-row insert with VALUES
- Alter add implicitly hidden ROWID column
- LOAD part REPLACE performance/availability through improved NPSI processing

Apr 2025

FL507

- Online conversion from PBR to PBG & repartitioning
- System temporal concurrency
- LASTUSED col support in SYSPLAN
- Temporal and archive tables in a single SELECT
- >64Gb PRIQTY, SECQTY support

Oct 2025

FL508

- Display Blocker enhancements
- Workfile management updates
- Generation of UUIDs
- REBIND phase in for SQL PL and trigger
- #of active log pairs increase to 1000
- Enhance local profiles

April 2026

FL509

- Convert remainder of catalog/dir
- Transfer ownership of SP, functions, etc.
- Utility history SHRLEVEL
- IO counts in RTS
- RLF filtering with wild card for IP
- STMT_HASHID2 to catalog

Selective Features under Function Level since GA

FL502

- Enable sysplex workload balancing (WLB) on a Db2 for z/OS server
 - *-MODIFY DDF with RQSTWLB keyword for location(s)*

FL504

- Minimized impact of invalidated packages with statement-level invalidation
 - *Use DEPLEVEL(STATEMENT) bind option*
 - *Incremental bind and auto-bind phase-in*
 - *Best to utilize with the packages contains large numbers of statements*
- Utility object-level history
 - *Object-level information in SYSIBM.SYSOBJEVENTS along with utility execution information in SYSIBM.SYSUTILITIES*
 - *Note : cleanup is user responsibility*
- SQL Data Insights – AI_COMMONALITY

FL506

- Non-disruptive clearing of data partitions in LOAD
 - *NOKEYDELETE to improve performance and availability when emptying partitions. REBUILT-pending empty status (RBDPM)*
- Improved performance for IN-list predicates
 - *Faster process for a residual IN predicate (with expression)*
 - *Up to 90% improvement in the best cases*
- INSERT with multi-row VALUES clause
 - *Usability and compatibility, plus automatic multi row insert*

```
INSERT INTO EMP
(EMPNO,FIRSTNME,MIDINIT,LASTNAME,WORKDEPT,PHONEXT)
VALUES
('000206','ELIZABETH','T','GRACE','D11','2866'),
('000207','JACK','Q','JOHNSON','D11','2867'),
('000208','JENNIFER','K','WHITE','D11','2868');
```
- Add implicitly hidden ROWID columns
 - *IMPLICLITY HIDDEN for a ROWID column, in the ADD COLUMN clause of an ALTER TABLE statement*
 - *Can be used for partition key, without impacting application*

Selective Features under Function Level since GA

FL507

- Online conversion from PBR to PBG
 - *Stacking support of PBR->PBG->PBR for partitioning updates in a single REORG*
- LASTUSED for SYSPLAN

FL508

- Generation of UUID values
 - *New function to generate universally unique identifier, i.e. GENERATE_UUID, GENERATE_UUID_BINARY*
 - *z14 and above*
- Increasing the max active and archive logs
 - *Up to 1000 log copy*
- More special register / global variables control for local application using profile tables
 - *CURRENT DEGREE, APPLCOMPAT, SQLID, PRECISION, OPTIMIZATION HINT, etc.*
- BLOCKING_THREAD UDF and –DIS BLOCKERS updates
 - *Allow granular input at object level to identify blocking threads*

FL509

- Reduced false page p-lock contention for PBG, PBR-APN
 - *DSSIZE > 64 GB*
- Numbers of I/O in real time statistics
- Online transfer ownership of application objects
 - *Stored procedures, functions and sequences without causing application outage*
- Utility history to include SHRLEVEL info

Preparation for Yosemite

FL508 : Work files FOR SORT and FOR DGTT

FL509 : UTS conversion for the rest of CAT/DIR

Db2 13 Continuous Innovation – Outside Function Levels (1/2)

2022

- New trace classes for distributed
- Improved –START/STOP ML command
- New LOAD option to reclaim NPSI space
- Improved messaging for utility FORCE option
- Improved –DISPLAY THREAD DBAT information
- Improved DECFLOAT support
- UNI_90 support in LOWER, UPPER, TRANSLATE
- List prefetch for MERGE
- PLAN_TABLE improvement for views & table expressions
- LOAD utility tape dataset estimation
- Accelerator support for LISTAGG, RAND
- PRDID values for specific DRDA levels
- Lock avoidance for singleton selects
- Control max number of concurrent UDFs to limit ECSA
- Remove stacking limitation for PBG to PBR conversions

2023

- Improved IFCID 0402 reset behavior
- Better index traverse counts in –DISPLAY STATS
- SQL Data Insights vector prefetch performance improvement & semantic clustering scoring accuracy
- APPLCOMPAT, PLANMGMT support for Db2-supplied routines
- Discovery and granular control for TLS connectivity
- Batch support for installation/migration CLIST
- SQLDA enhancement for REXX applications
- -DISPLAY GROUP migration readiness reporting
- Free inactive packages for native REST services
- Improve latch contention by reducing time to boost, and improved latch holder information
- Dynamic SQL Data Insights vector prefetch performance
- Simplified DROP VIEW authorization
- More granular accounting trace information for distributed threads
- Improved authorization for Db2 MQ tables
- BIND QUERY restriction removed for SQL PL packages
- Privilege improvements for –DIS PROFILE, -DIS DYNQUERYCAPTURE
- More responsiveness to FTB SYSINDEXCONTROL changes
- Separate location statistics from STATIME_MAIN
- Improved message handling for DSNJ110E log full conditions

2024

- Improved message information for stale GBP pages
- Better profile options for monitoring connections for security
- Redirected recovery support for XML versioning
- CORS support for Db2 REST services
- Password phrase support in trusted contexts with JDBC Type 2 drivers
- SQL Data Insights model retraining
- Removal of ephemeral ports for DVIPA monitoring
- Improved DSNJ114I messaging for log archive errors
- DISPLAY privilege support for –DIS ML and –DIS RLIMIT
- New statistics for IP addresses accessing Db2
- SPECIFICIMP support for WLM sysplex routing
- Bind location alias to different IP address for single subsystems
- ECSA relief by moving DDF WLM performance blocks
- Part-level support for MODIFY STATISTICS
- REBIND PACKAGE EXPLAIN(ONLY) support for advanced triggers
- COPY utility zIIP offload

Db2 13 Continuous Innovation – Outside Function Levels (2/2)

2025 (January ~ June)

- Prevent console flooding by DSNL030I messages
- AUTHID based monitoring with security profiles
- EXPLAIN(ONLY) support for native REST services
- REST API support for SQL Data Insights administration
- Abbreviated APPLCOMPAT SQL syntax
- Improved sort workfile monitoring
- Datagram message support in MQListener
- Improved statement-level zIIP statistics
- IFCID350 dynamic SQL current schema name support
- DSNTXAZP improved discovery and update of DSNTIDxx members
- IPv4 and IPv6 subnet address support for trusted context ADDRESS
- Disable generation of GRANT statements for installation jobs
- [Store decompression dictionaries in CDDS dataset to reduce IFI306, log read and GBP dependency overhead](#)
- Zparm option to prevent MODIFY RECOVERY utility deletion of image copies
- Support for the same trusted contexts to be used for both local connections
- Support for a *queue* parameter in the CAF OPEN function
- New diagnostic level in the profile to reduce console messages
- LOB support for IDAA V8– store up to 2GB, result set up to 32K
- SQL Data Insights to be able to utilize secondary auth ID

2025 (July~)

- Updates on ML commands to support imported data for Db2ZAI system assessment and SQL OPT dynamic filtering
- LISTDEF and Db2 installation CLIST enhancements for future catalog and directory conversions
- RACF group support in the trusted context SYSTEM AUTHID clause
- IDAA support for HASH built-in functions
- Enhancements in DSN1COMP for REORG option and for LOB compression
- Additional DSNV508I msg to warn 31-bit memory consumption in DIST address pace
- Control for new connection requests to reduce the system impact
- Reduce console flooding with DSNL030I msg
- Accounting information on whether the connection is secure
- [Open Telemetry support](#)
- Updates in DISPLAY ML command for Db2ZAI
- LOAD WHEN predicate enhancements
- Earlier notification of data set reaching max extents

2026

- [Generating a YAML file for configuration parameters that cannot be discovered](#)
- REORG DISCARD usability improvement
- BIND PACKAGE support for zFS DBRMs
- -DISPLAY STATS improvement for FTBs
- Improve serviceability with REORG message to find conflicting update
- IDAA V8 support

Replication Enhancement against compressed tables

Db2 13 FL500 +
PTF

Improve replication concurrency and performance of compressed tables by storing expansion dictionary in **C**ompression **D**ictionary **D**ata **S**et (CDDS)

Store expansion dictionary in a VSAM data set.

- Avoid opening data set for replication log read
- Avoid DBD locks
- Avoid reading log record for an older dictionary
- Possibly avoid GBP dependency for reading dictionary

Performance

- Range of 5 to 50% LOG READ (replication capture task) CPU saving depending on the scenarios

To enable

- Install enabling APAR PH64099 and set of precondition APARs (see note next pages)
- Apply replication products code change
- Function Level V13R1M500+
 1. Define CDDS (KSDS), set zparm CDDS_MODE to be set as "SOURCE_ONLY"
 2. Populate CDDS via REORG INITCDDS

Benefit most if replication read causes GBP dependency, and with large DB with many tables, possible DBD lock contentions

CDDS support

1. Db2 APARs for CDDS updates
 - PH64096, PH64097, PH64098 (pre-condition)
 - PH64099 (enablement)
2. Replication updates are required
 - PH64273 for QREP
 - IDAA V8 .1 for In-sync

See the details from Ping Wang' blog:

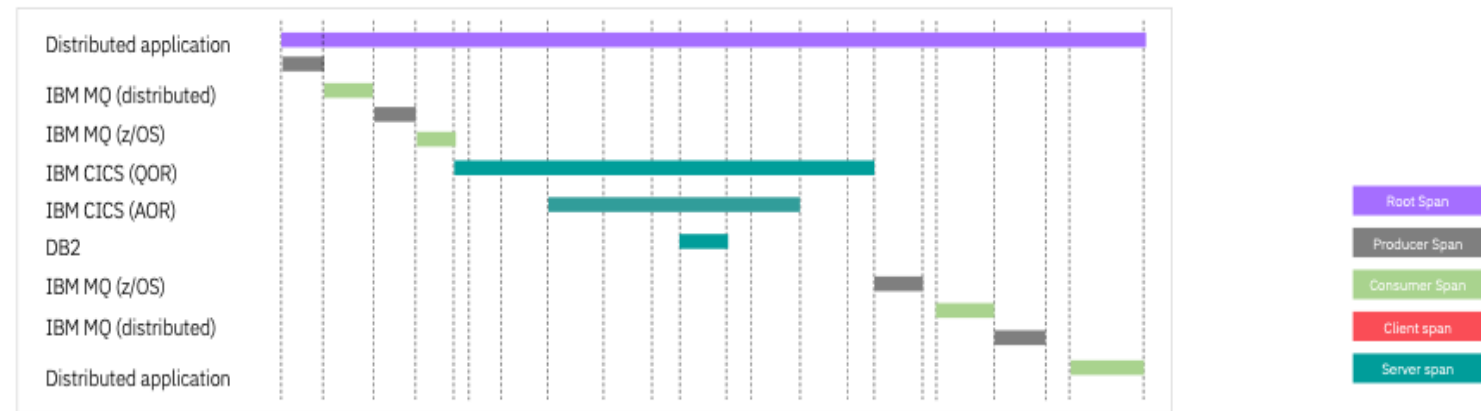
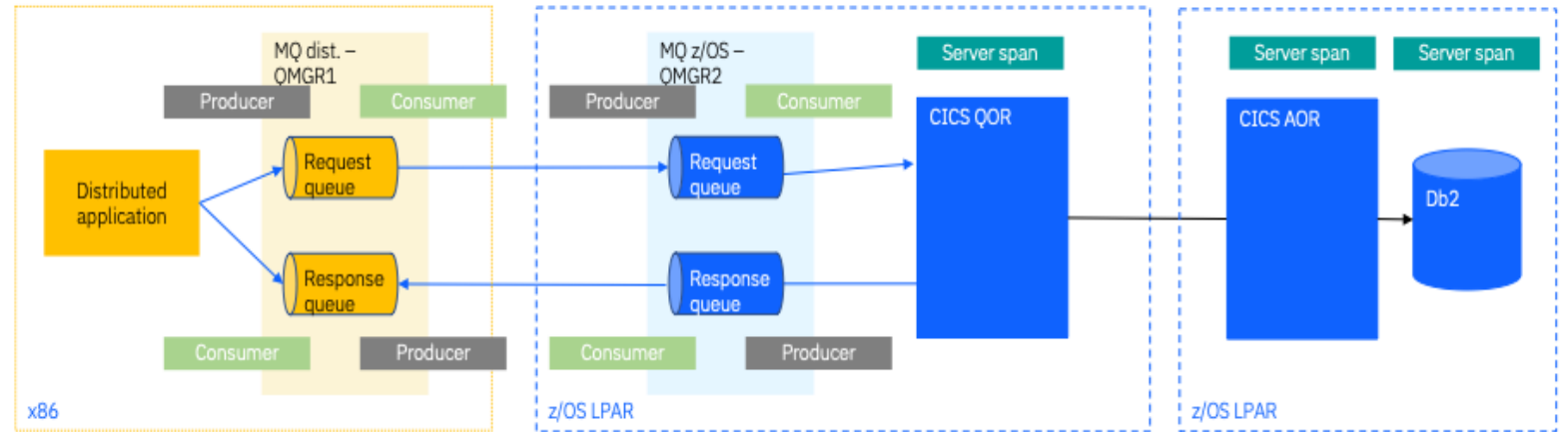
<https://community.ibm.com/community/user/blogs/ping-wang/2025/07/01/cdds-enhancements>

Observability Across Z Middleware

OpenTelemetry is a vendor-agnostic observability framework that assists in generating, processing, and distributing telemetry data

- Standard data collection across platform
- Reduce need for multiple data collections

Distributed Tracing – MQ- CICS – Db2 example



Open Telemetry Support for Db2 for z/OS

- Support for inbound workloads with a trace parent from:
 - Db2 for z/OS native RESTful services
 - JDBC Type-4/Db2 JCC type-4 Client driver 1
 - CICS-Db2 Attachment Facility
 - CICS Liberty-JDBC type-2 (RRS AF) 2
 - IMS-Db2 Attachment (ESAF)
 - IMS-Db2 Java Adapter-JDBC type-2 (RRS AF) 2
 - z/OS Connect-Db2 Rest service (HTTP header)

1 JDBC Type-4 support GA with Db2 Connect 12.1.3 or a special build for Db2 Connect 12.1.2.

2 Attachment controlled by CICS or IMS and not JDBC type-2.

- Db2 will emit an OTel span record with basic performance metrics
 - (CPU time and elapsed time) for each unit of work.
- Environments must have IFCID 3 on to report “in Db2” timings
- Db2 for z/OS support (FL100)
 - PH67971 – Db2 overall
 - PH68073 – Db2 for z/OS IMS Attach
 - Fixcat: IBM.Function.OpenTelemetry

- New Db2 commands
 - START OTEL,
 - STOP OTEL,
 - DISPLAY OTEL (DETAIL)
- New IFCID 394 (OTEL STATISTICS trace) to record numbers of spans processed

- Db2 spans will be written as SMF SMF type 1161, subtype 1
- IBM measurement shows approx. 7 microsecond per span record (per commit)

Automating Install, Migration, and Update processes

Db2 13 FL100 + PTF

- Total amount of space for all 4 KB sort work table spaces in the work file database.
- SMS storage class name for allocating image copy data sets created by installation jobs.
- IEAAPFxx member of SYS1.PARMLIB
- Name of the APF-authorized early code library.

Support to generate Db2 migration artifacts (traditional jobs or z/OSMF artifacts) in background mode

- ⇒ reducing a 40 mins long process to less than 3 mins
- ⇒ Db2 13 APARS PH52482 & PH52882

Support for auto-discovery of the Db2 configuration parameters

- ⇒ DSNTXAZP enhanced to discover all discoverable Db2 configuration parameters (90%)
- ⇒ Db2 13 APAR PH63793
- ⇒ Integrates with artifacts generation

Support to validate/customize non-discoverable Db2 configuration parameters

- ⇒ Db2 13 APAR PH68740 – provides an editable YAML file for customers to update as needed
- ⇒ Integrates with DSNTXAZP and artifacts generation

Standardize procedures for managing/maintaining Db2 for z/OS subsystems

- ⇒ Using Python and ZOAU (Z Open Automation Utility)
- ⇒ Tech Preview
- ⇒ Align with z Systems strategy

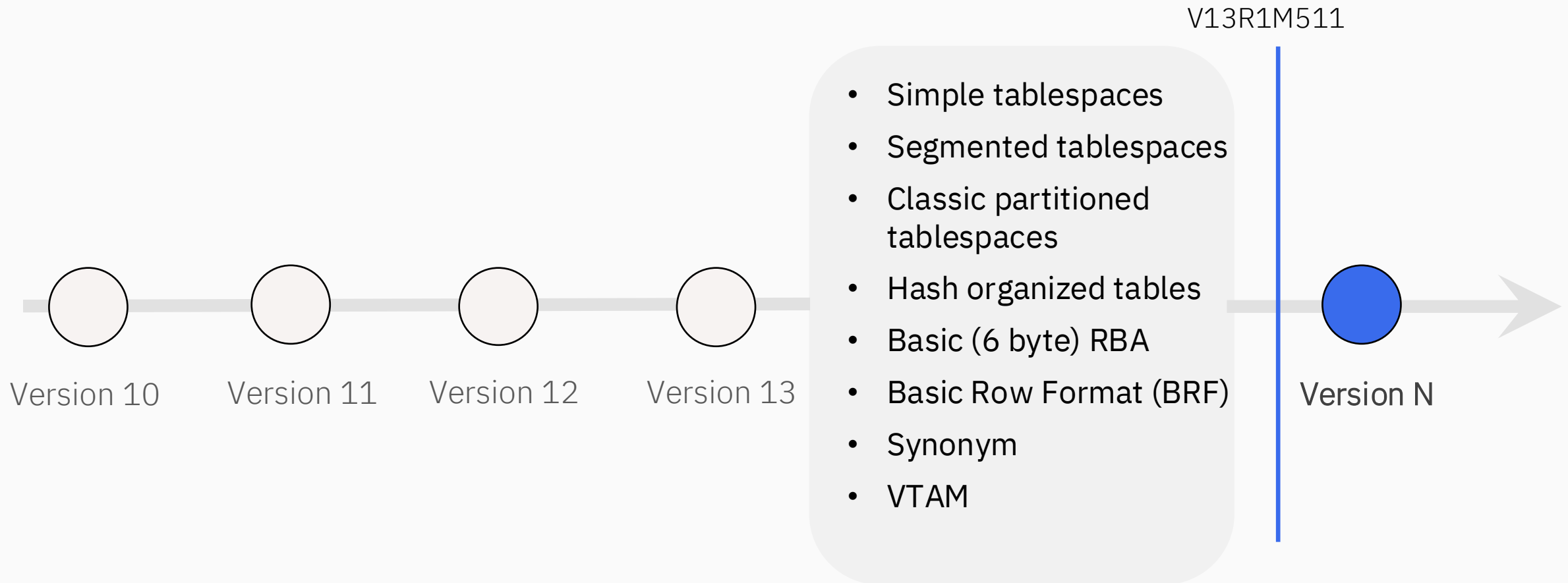


Continuous Delivery Yosemite-prep

SECTION Two



New Foundation for Future Enhancements



Removing Support of Deprecated Features

- Simple tablespaces
- Segmented tablespaces
- Classic partitioned tablespaces
- Hash-organized tables
- Objects with 6-byte RBA or LRSN values
- Table spaces with basic row format (BRF) other than work files
- Synonym
- VTAM

- **Deprecated but not removed:**
 - Usage is not recommended, but supported
 - [Ex. PBR Absolute Page Numbering](#)
- **Deprecated and will be removed**
 - No more support
 - No more testing,
 - Product codes of the features could be deleted
 - [Ex. Non-UTS table spaces](#)
- Validation planned at V13R1M511 activation

Deprecated function in Db2 13

<https://www.ibm.com/docs/en/db2-for-zos/13.0.0?topic=13-deprecated-function-in-db2>

Reference

Non-UTS

```
SELECT DBNAME, NAME, TYPE
FROM SYSIBM.SYSTABLESPACE
WHERE TYPE = ' ' OR TYPE = 'L';
```

Hash

```
SELECT DISTINCT B.DBNAME, B.TSNAME, B.NAME
FROM SYSIBM.SYSTABLESPACE A, SYSIBM.SYSTABLES B
WHERE A.DBNAME=B.DBNAME
AND A.NAME=B.TSNAME
AND A.ORGANIZATIONTYPE = 'H';
```

6 bytes RBA

```
SELECT DISTINCT DBNAME, TSNAME, RBA_FORMAT
FROM SYSIBM.SYSTABLEPART
WHERE RBA_FORMAT = 'B'
OR RBA_FORMAT = ' ';
SELECT DISTINCT IXNAME, RBA_FORMAT
FROM SYSIBM.SYSINDEXPART
WHERE RBA_FORMAT = 'B'
OR RBA_FORMAT = ' ';
```

Basic row format (BRF)

```
SELECT DISTINCT A.DBNAME, A.TSNAME
FROM SYSIBM.SYSTABLEPART A
WHERE A.FORMAT <> 'R'
AND EXISTS (SELECT 1 FROM SYSIBM.SYSTABLESPACE B
WHERE A.DBNAME=B.DBNAME
AND A.TSNAME=B. NAME
AND B.TYPE <> 'O');
```

Note: table space to be converted has edit or validation routines required additional steps

```
SELECT DBNAME, TSNAME, NAME, EDPROC, VALPROC
FROM SYSIBM.SYSTABLES
WHERE EDPROC <> ' ' OR VALPROC <> ' ' ;
```

Synonyms

```
SELECT NAME, TBNAME
FROM SYSIBM.SYSSYNONYM
```

VTAM

Converting to TCP/IP communication from VTAM in Db2 for z/OS

(<https://www.ibm.com/docs/en/db2-for-zos/13.0.0?topic=systems-converting-tcpip-communication-from-vtam>)

UTS Conversion of Db2 System Objects

- Catalog & Directory
- Work file data sets

- 19 Catalogs and 2 directories remained as non-UTS
- Function level 509 provides conversion by reorg (DSNTIJCR)
 - -DISPLAY GROUP UTSCONVERSION to show the readiness of conversion
 - REORG TABLESPACE utility with the new CONVERTUTS keyword
 - Check the blog post "Converting Db2 catalog and directory objects to UTS with FL 509 in Db2 13"
<https://ibm.biz/~Flm4ZcAbn>
- Function level 511 (V13R1M511) cannot be activated without above conversion

UTS Conversion of Db2 System Objects

- Catalog & Directory
- Work file data sets

Today, workfile allocation is very complicated

- WFDBSEP zparm with SECQTY zero (sort) vs. non-zero (DGTT)
- Most customers are using segmented TS

Moving all workfile TS to PBG and simplify the definition

- At APPLCOMPAT V13R1M508, CREATE TABLESPACE for work files (PBG)
- Work files FOR SORT and FOR DGTT

Important APARs before converting workfiles to PBG

- PH65632: re-enable parallelism referencing a DGTT created in PBG workfile
- PH70190: performance improvement for PBG defined with FOR SORT option with multiple partitions



Future (Yosemite) Candidates

SECTION THREE



Major Theme of Yosemite (vNext)

- New foundation for future innovation
- Simplification
- Scalability and performance
- Application Availability
- Quantum Safe



A New Cryptographic era

Quantum computers can perform certain mathematical computations exponentially faster than a classical computer.

There will be a time when the power of quantum computing may crack public key cryptographic security protection.

Data and security are already at risk for quantum-attacks

Not Quantum safe

- ENCRYPT_TDES
- DECRYPT_data-type
 - data-type: BINARY, BIT, CHAR, DB
- HASH_CRC32/MD5/SHA1, HASH (MD5, SHA1)

Quantum safe

- ENCRYPT_DATAKEY,
- DECRYPT_DATAKEY_type
 - **type**: INTEGER, BIGINT, DECIMAL, VARCHAR, VARGRAPHIC, CLOB, DBCLOB, BIT
- HASH value 2 (SHA256)
- HASH_SHA256

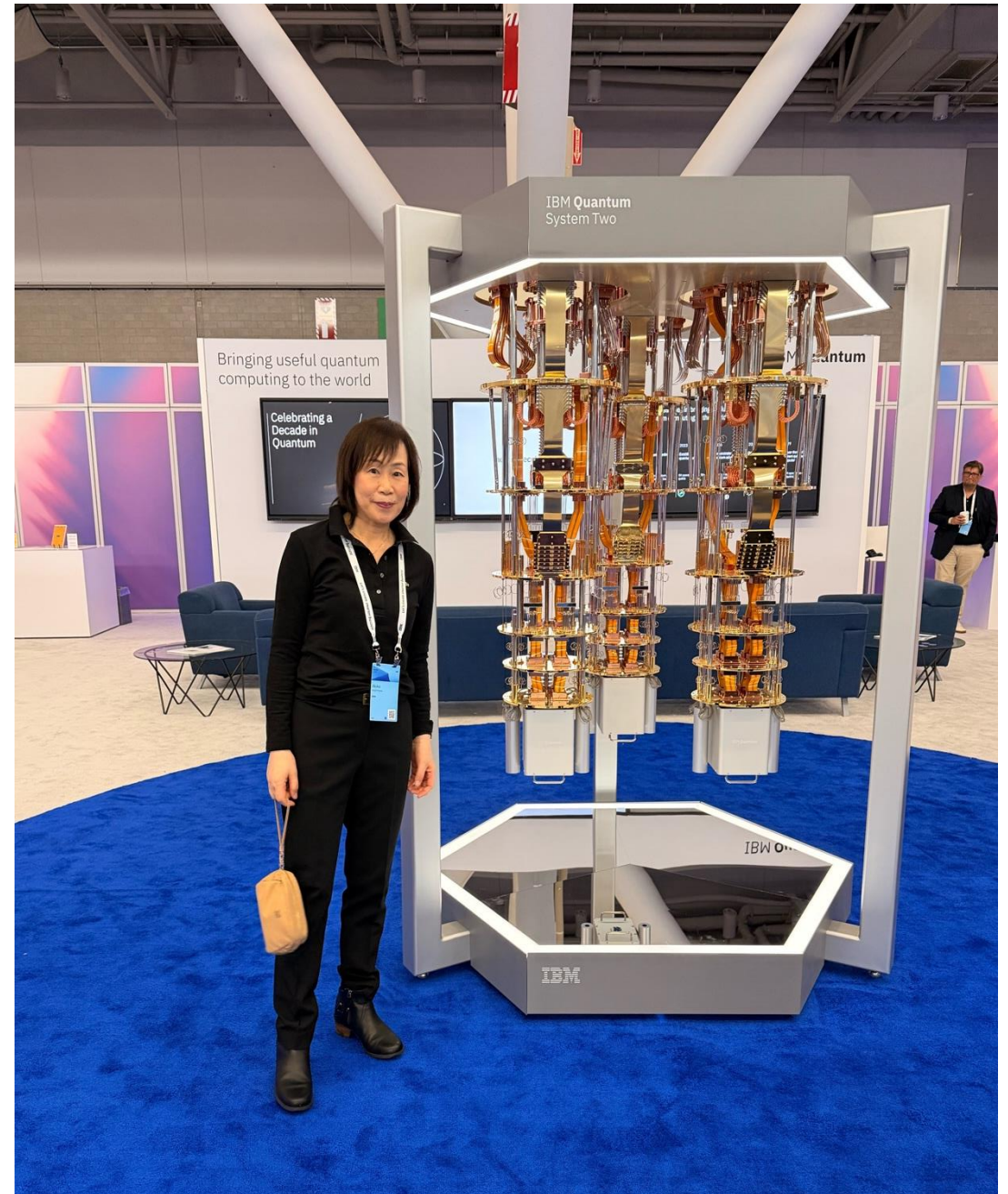
Plans at APPLCOMPAT vNext M501+

- Static SQL :
 - BIND / REBIND will fail
- Dynamic :
 - Prepare will fail

- HASH_SHA512 will be added
- Default behavior updates
 - Algorithm of HASH :
 - MD5 → SHA-256
 - Return type :
 - VARBINARY(16) → VARBINARY(32)

IBM Quantum at THINK

<https://www.ibm.com/quantum>



Become Influencer!

Db2 for z/OS CAC (Customer Advisory Council)

- Developers to bring new enhancement items to gain feedback from customers
- If you are not a member, contact Dorothy Lin (dclin@us.ibm.com) to join

One hour a month commitment

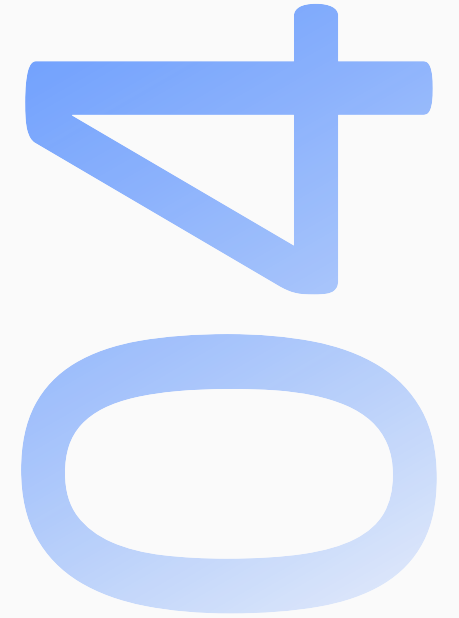
Db2 for z/OS News Letters and Blog

- Db2 for z/OS and its ecosystem Community <https://ibm.biz/~vkMHX48Dj>.



More Consumable Db2

SECTION 4



AI is Changing Data Interaction

Combined relational predicate with AI semantic functions

From queries → **Discovery**

From data access → **Insights Generation**

- More on ZOS-06 Wed 9:00
- Use AI to Gain Business Insights From Data Now!
(Richard Ruppel & akiko)

SQL Data Insights and SQL Data Insights PRO

AI_SIMILARITY

- Find similar shoes as Nike Free Run but with Adidas brand

AI_SEMANTIC_CLUSTER

- Find similar shoes as group of shoes in “Nike Free run, Adidas Supernova, NewBalance FuelCell

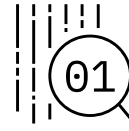
AI_COMMONALITY

- Find the most common shoes in the running shoes category

AI_ANALOGY

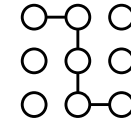
- Give me Asics shoes which has the similar walking performance rating as Hoka (relationship of Hoka - walking rating pe)

Current database administrators are facing **operational overload**



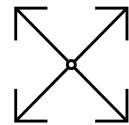
Too many siloed DBA tools

Absence of one authoritative view across sysplex, data sharing, members, workloads, and tools—no more fragmented database environments.



Investigations take too long

DBAs want quick and clear answers: what's wrong, why it happened, and what to do next—not more metrics.



Lack of proactive intelligence

DBAs continue to suffer from little-to-no proactive intelligence built into their workflows.

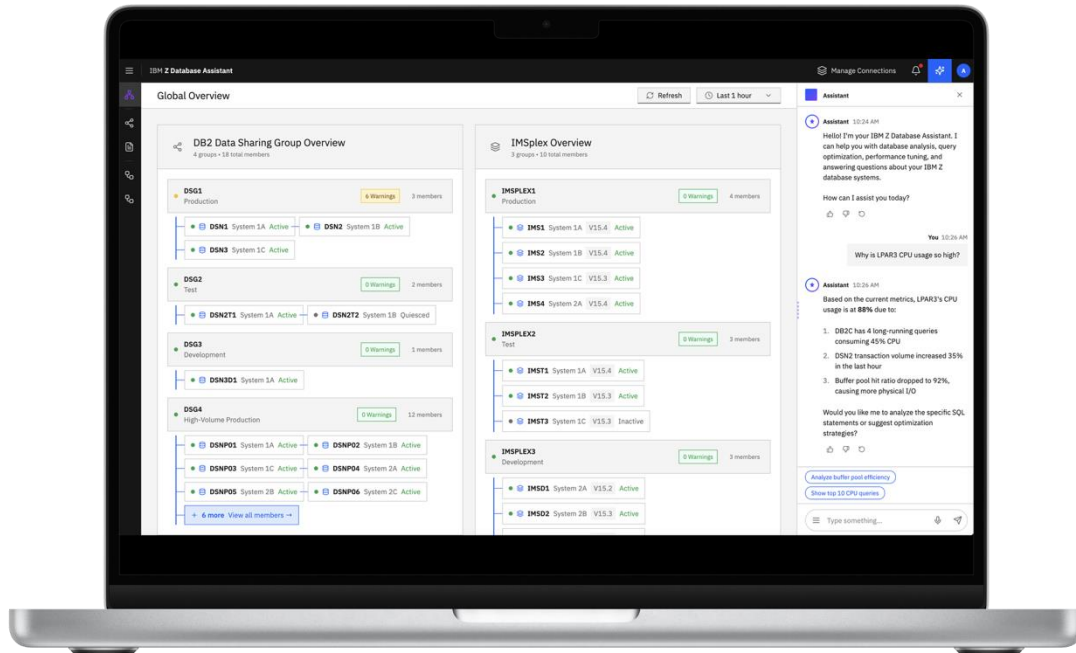


Increasingly rare skill sets

Difficulty staying current with skills while multi-database dexterity trend continues and DBA workforce gets younger.

IBM Z Database Assistant

A unified, intelligent workspace using agentic AI to augment DBAs



Faster Troubleshooting

Accelerated troubleshooting and tuning across Db2 and IMS to keep data pipelines, applications and AI moving faster.

Accelerated DBA on-boarding

AI assistant that explains issues in plain language, automates routine DBA tasks, and helps bridge the DBA skill gap.

Proactive database administration

Agentic framework proactively assessing database environments, optimizing cost and performance, reducing risk and keeping databases AI-ready.

Purpose-built for Db2/IMS on Z

Deep integration with the trusted Z database tools ecosystem and built-in guardrails.

Global Overview

Refresh Last 1 hour

DB2 Data Sharing Group Overview

4 groups • 18 total members

DSG1
Production 6 Warnings 3 members

- DSN1 System 1A Active
- DSN2 System 1B Active
- DSN3 System 1C Active

- DSN2T1 System 1A Active
- DSN2T2 System 1B Quiesced

DSG3
Development 0 Warnings 1 members

- DSN3D1 System 1A Active

DSG4
High-Volume Production 0 Warnings 12 members

- DSNP01 System 1A Active
- DSNP02 System 1B Active
- DSNP03 System 1C Active
- DSNP04 System 2A Active
- DSNP05 System 2B Active
- DSNP06 System 2C Active

+ 6 more [View all members →](#)

DB2 Single Subsystems

3 subsystems not in a Data Sharing Group

IMSplex Overview

3 groups • 10 total members

IMSPLEX1
Production 0 Warnings 4 members

- IMS1 System 1A V15.4 Active
- IMS2 System 1B V15.4 Active
- IMS3 System 1C V15.3 Active
- IMS4 System 2A V15.4 Active

- IMST1 System 1A V15.4 Active
- IMST2 System 1B V15.3 Active
- IMST3 System 1C V15.3 Inactive

IMSPLEX3
Development 0 Warnings 3 members

- IMSD1 System 2A V15.2 Active
- IMSD2 System 2B V15.3 Active
- IMSD3 System 2C V15.2 Active

IMS Single Subsystems

3 subsystems not in an IMSplex

Assistant

Assistant 10:24 AM

Hello! I'm your Aura AI assistant. I can help you with database analysis, query optimization, performance tuning, and answering questions about your Db2 systems.

How can I assist you today?

You 10:26 AM

Why is LPAR3 CPU usage so high?

1. DB2C has 4 long-running queries consuming 45% CPU
2. DSN2 transaction volume increased 35% in the last hour
3. Buffer pool hit ratio dropped to 92%, causing more physical I/O

Would you like me to analyze the specific SQL statements or suggest optimization strategies?

[Analyze buffer pool efficiency](#)

[Show top 10 CPU queries](#)

Type something...

IBM Z Database Assistant- Unified Workplace for DBAs

IMSPLEX1 / IMS2

IMSPlex1 - IMS2

Refresh Last 1 hour

Overview Object explorer Command processor SQL editor

Total average hit ratio	Total number of Buffers	Databases
13.95%	32	843

We'll look at the database status by clicking the **Databases** tab.

[Back](#) [Next](#)

OSAM summary

Total Buffer count	Average Hit ratio
12	27.91%

VSAM summary

Total Buffer count	Average Hit ratio
20	0.0%

OSAM subpool summary

Subpool name	Buffer size	Number of buffers	Hit ratio	Page fix options	Cache option
OSAM	2048	4	0.00	N/N	NO
OSAM	6144	4	83.72	N/N	NO
OSAM	8192	4	0.00	N/N	NO

Items per page: 1-3 of 3 items of 1 pages

VSAM subpool summary

Assistant

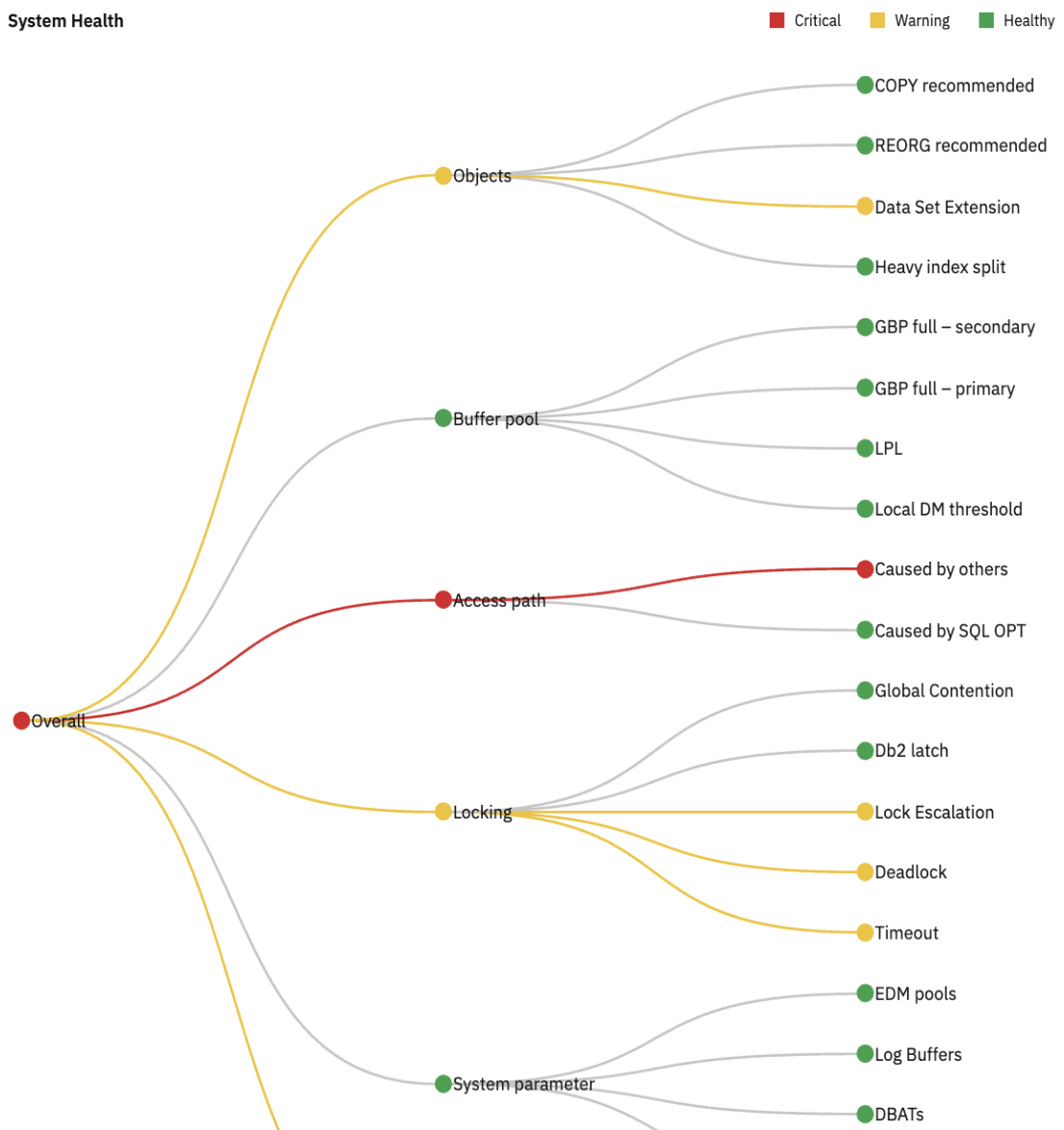
Assistant 10:24 AM

Hello! I'm your IBM Z Database Assistant. I can help you with database analysis, query optimization, performance tuning, and answering questions about your Db2 & IMS systems.

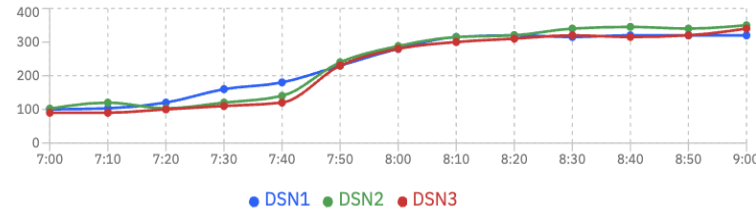
How can I assist you today?

Type something...

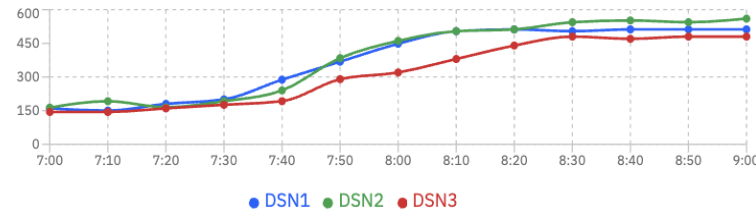
System Health



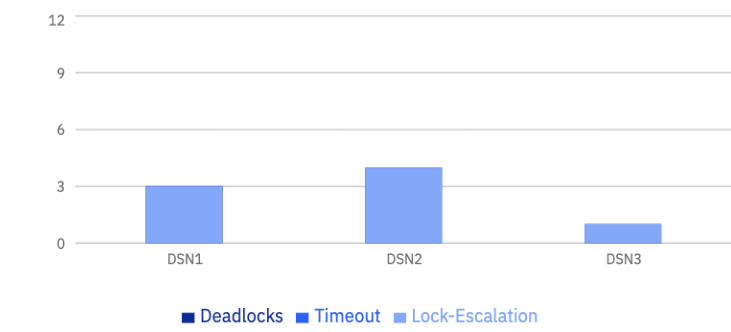
DB2 CPU usage (seconds)



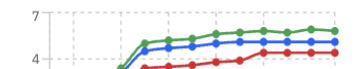
Db2 zIIP usage (Seconds)



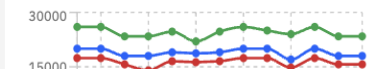
lock issues



Getpage (Millions per second)



Available memory (MB)



Assistant

Assistant 10:24 AM

Hello! I'm your Aura AI assistant. I can help you with database analysis, query optimization, performance tuning, and answering questions about your Db2 systems.

How can I assist you today?



You 10:26 AM

Why is LPAR3 CPU usage so high?

Assistant 10:26 AM

Based on the current metrics, LPAR3's CPU usage is at **88%** due to:

1. DB2C has 4 long-running queries consuming 45% CPU
2. DSN2 transaction volume increased 35% in the last hour
3. Buffer pool hit ratio dropped to 92%, causing more physical I/O

Would you like me to analyze the specific SQL statements or suggest optimization strategies?



[Analyze buffer pool efficiency](#)

[Show top 10 CPU queries](#)

SYSPLEX1 / DSG 1

DSG 1

Refresh

Last 1 hour

Overview Object Explorer SQL Editor SQL Tuning System Assessment Performance Insights

System Health

Critical Warning Healthy

DB2 CPU usage (seconds)

DBA Dashboard (Unix System Services)

- Db2 and IMS – overview
 - System
 - Object health
 - Deprecated objects (Db2)
- Catalog/object navigation
- Command processor
- SQL Editor
- SQL Tuning / Optimization (Db2)
 - Top N SQL
 - Index advisory and access path optimization
 - Regression detection
- Resource tuning (IMS)
- Health telemetry

Agents & MCP tools (container on IBM watsonx Assistant for Z)

- Updated Db2 and IMS agent
- Knowledge agent
 - Product knowledge on top of ZRAG (z/OS Retrieval-Augmented Generation) from wxa4z
- Access Control Agent (Db2)
 - Explore and understand, consolidate the Db2 access privilege
- DDL impact analysis agent (Db2)
- SQL tuning agent (Db2)
- Telemetry/System Assessment agent (Db2)
 - Visualization of metrics
 - Lock contention analysis
- NL2SQL and IDAA agent (Db2)
- Tech preview of ISPF agent

Assistant

Assistant 10:24 AM

Hello! I'm your Aura AI assistant. I can help you with database analysis, query optimization, performance tuning, and answering questions about your Db2 systems.

How can I assist you today?

👍 🗨️ 🔄

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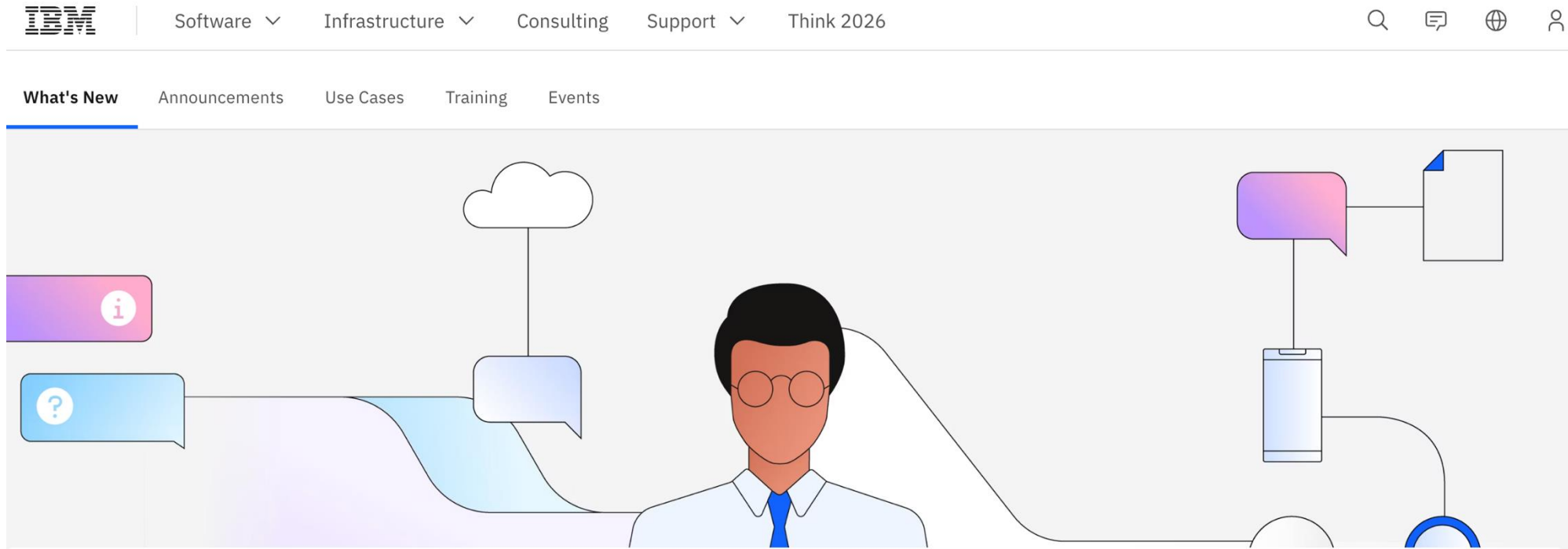
Analyze buffer pool efficiency

Show top 10 CPU queries

Type something...



References



Artificial Intelligence

IT automation

IBM Z Database Assistant
brings intelligent operations
for the AI era

[Experience with click thru demo](#)



Summary

“Db2 for z/OS: A future-ready hybrid data platform—secure, resilient, intelligent by design.”

1

Continuous Delivery

Db2 13 recent key updates with and without function level

2

Preparing for Yosemite

Foundation for future

3

Yosemite : version next

Theme and features candidates

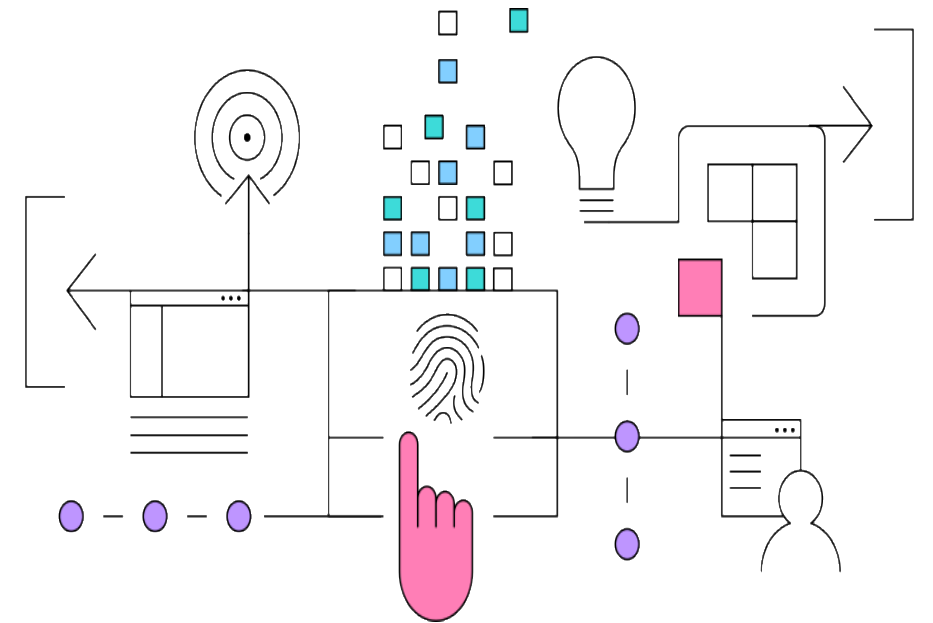
4

Consumable Db2 with AI Assist

Database Assistant and Db2 AI for z/OS

Questions?

akiko@us.ibm.com



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