

DB2 12.1 TOOLS UPDATE

Marcin Marczewski

EMEA Data Management & OEM Technical Sales Leader

marcin.marczewski@pl.ibm.com

LinkedIn: <https://www.linkedin.com/in/marczewski/>

Here's the **problem**

17%
**annual
database
growth**

Manage
scale is
more
complex
than ever.

70%
**of enterprises
operate in
hybrid mode**

Fragmentation
makes
management
harder.

5+
**years for new
DBAs to get
fully productive**

With demand
outpacing,
experienced
DBAs are
increasingly
scarce.

Traditional
tools can't
keep up.

DBAs
need new
solutions to
manage scale,
complexity,
and
performance.

Overview



Sergio,
Database Administrator

Sergio is responsible for the overall health of his company's databases. He monitors the performance of the databases, ensures the databases are secure, and plans for the system's daily usage capacity. When problems arise, Sergio is on-call 24/7.

Responsibilities

- 🖥️ Database performance monitoring + tuning
- 🛡️ Database security
- 📊 Storage and capacity planning
- 🔧 Installation, upgrade, configuration, migration

Team makeup

Junior DBAs
Application developers
Data engineers
Project managers

Goals

Ensure that databases are running smoothly and securely (keep the lights on)
Minimize interruptions by others
Stay ahead of problems instead of reacting when problems arise

Pain Points



Sergio,
Database
Administrator

Finding the right information / documentation

- *"I search for documentation daily, sometimes hourly. IBM documentation can feel like boiling the ocean. I use Google."*

Training junior DBAs

"Staffing is an issue. Workloads are increasing. A value add would be a way to handle increased workloads/mixed workloads and not have to increase staffing."

Identifying and resolving the root problem

"I have a lot of information, but I don't know what is relevant to my current issue."

Optimizing + tuning the database

"Optimizing performance is complex and requires expertise. The current Tuning UX in DMC is complicated and not ideal."



Db2 Intelligence Center

powered by **watsonx**

A Unified, AI-powered Platform for the Next Era of Db2 Management



Db2 Intelligence Center

powered by **watsonx**

PDUG



Unified Management

Manage all your Db2 systems from a single control plane



Query Optimization

Tune queries faster with AI-powered recommendations



Database AI Assistant

Get expert guidance in seconds, not hours



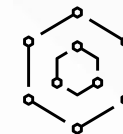
Tune Configurations

Maximize performance with smarter parameter tuning



Monitoring Drill-downs

Investigate and resolve issues with precision

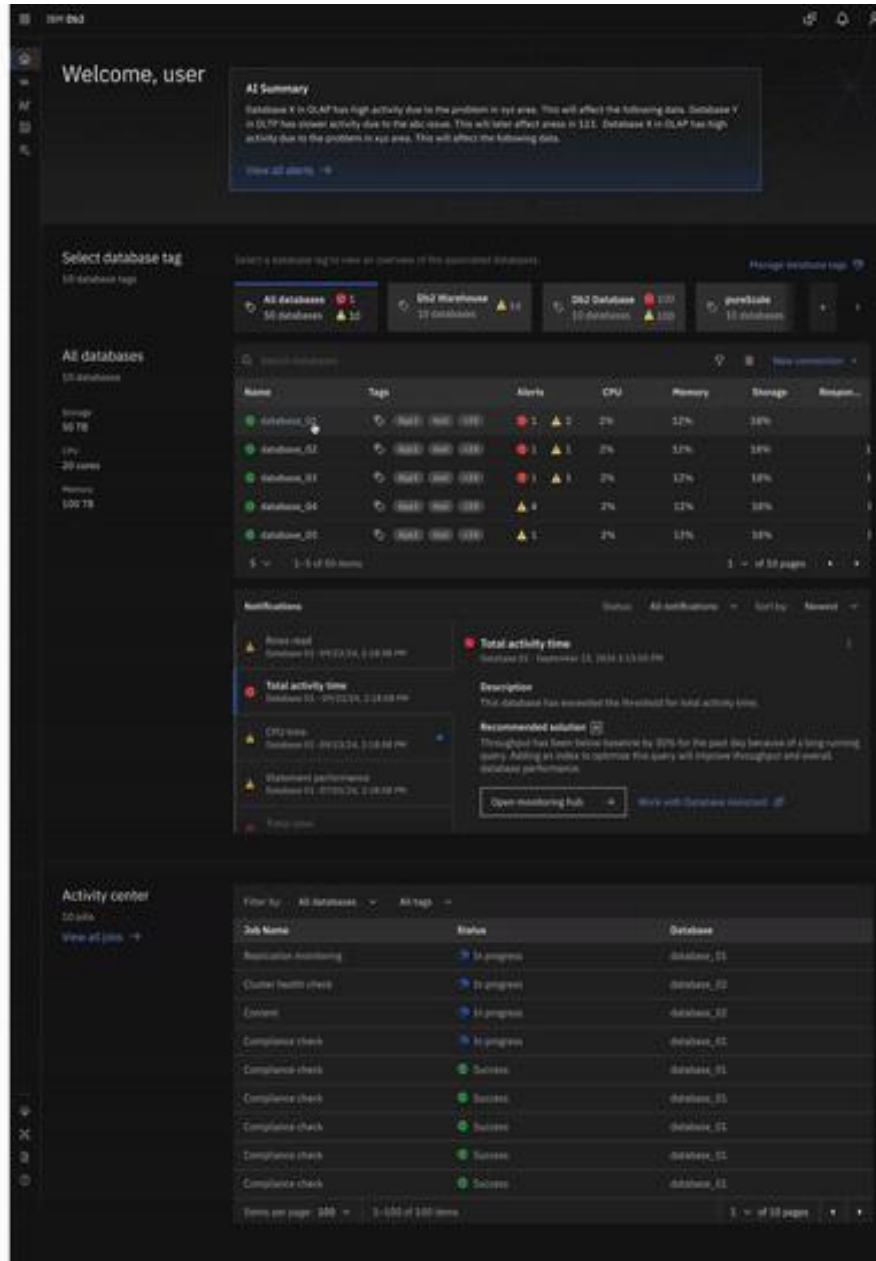


Advanced Automation

Automate scripts, schedules, and runbooks to save time



Unified Management

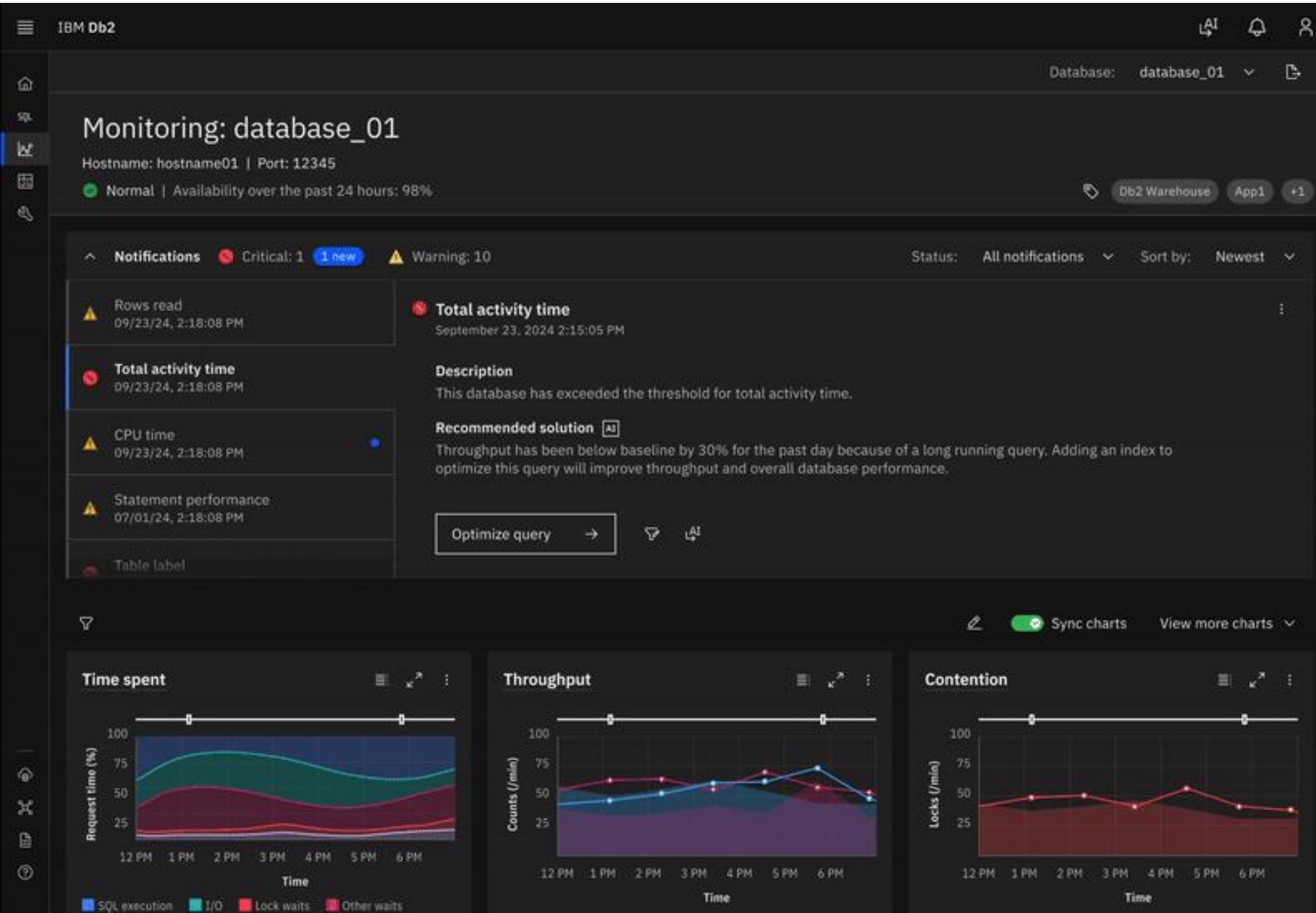


Monitor and manage all your Db2 instances—on-prem, cloud, or hybrid—from a single interface

- **Single Pane of Glass:** See all Db2 environments in one place, eliminating silos.
- **Real-Time Insights:** Instantly track availability, performance, and key metrics.
- **Fast Problem Resolution:** Drill down into any instance to diagnose and act quickly.



Database AI Assistant

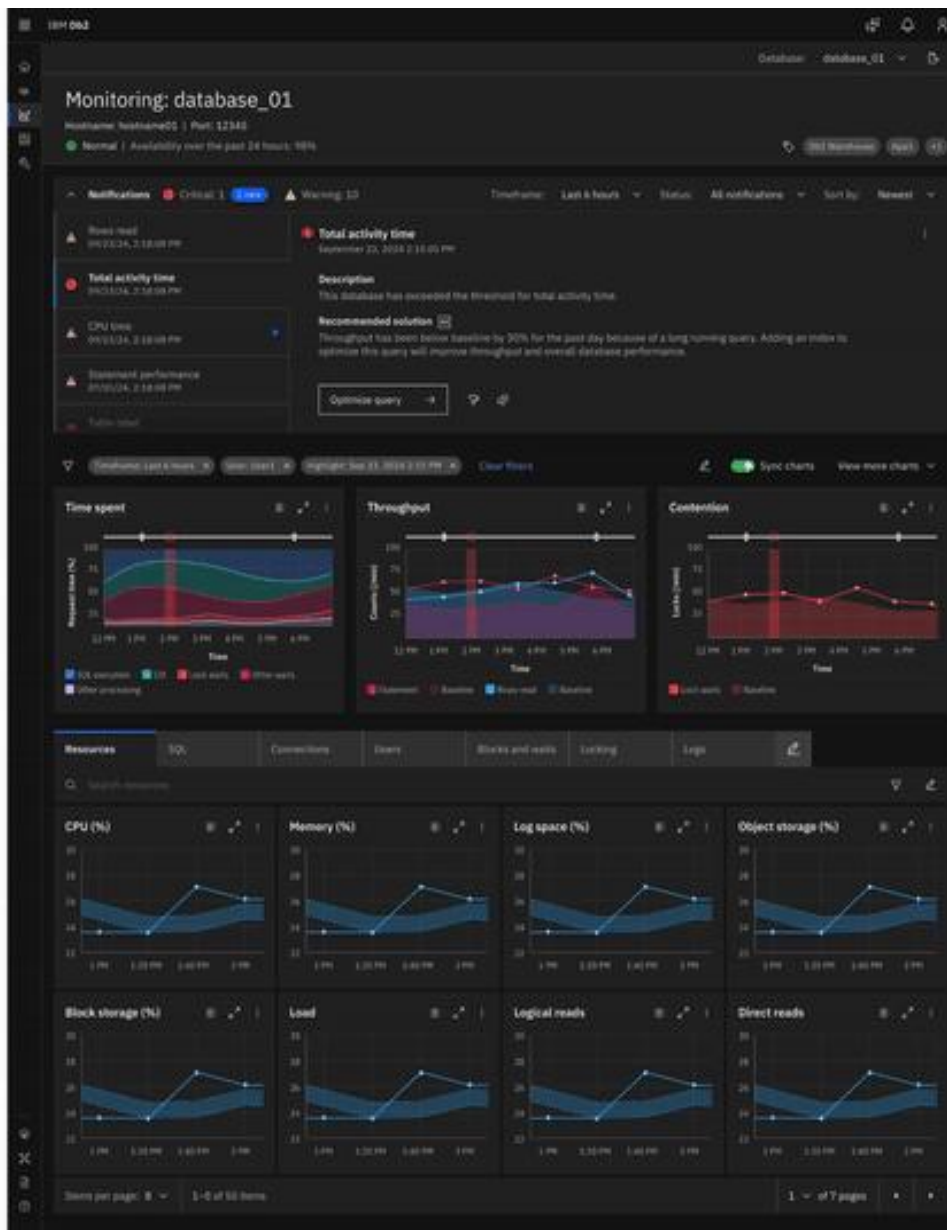


Swiftly resolve database issues and manage expanding environments efficiently

- **Db2 Expert:** Get answers to your Db2 questions, faster
- **Monitoring Metrics:** Quickly access key metrics using natural language queries
- **Simplified Troubleshooting:** Get recommendations for troubleshooting common database issues
- **Advanced Analysis:** Accurately identify root cause of performance issues, bottlenecks, deadlocks



Monitoring Drill Downs

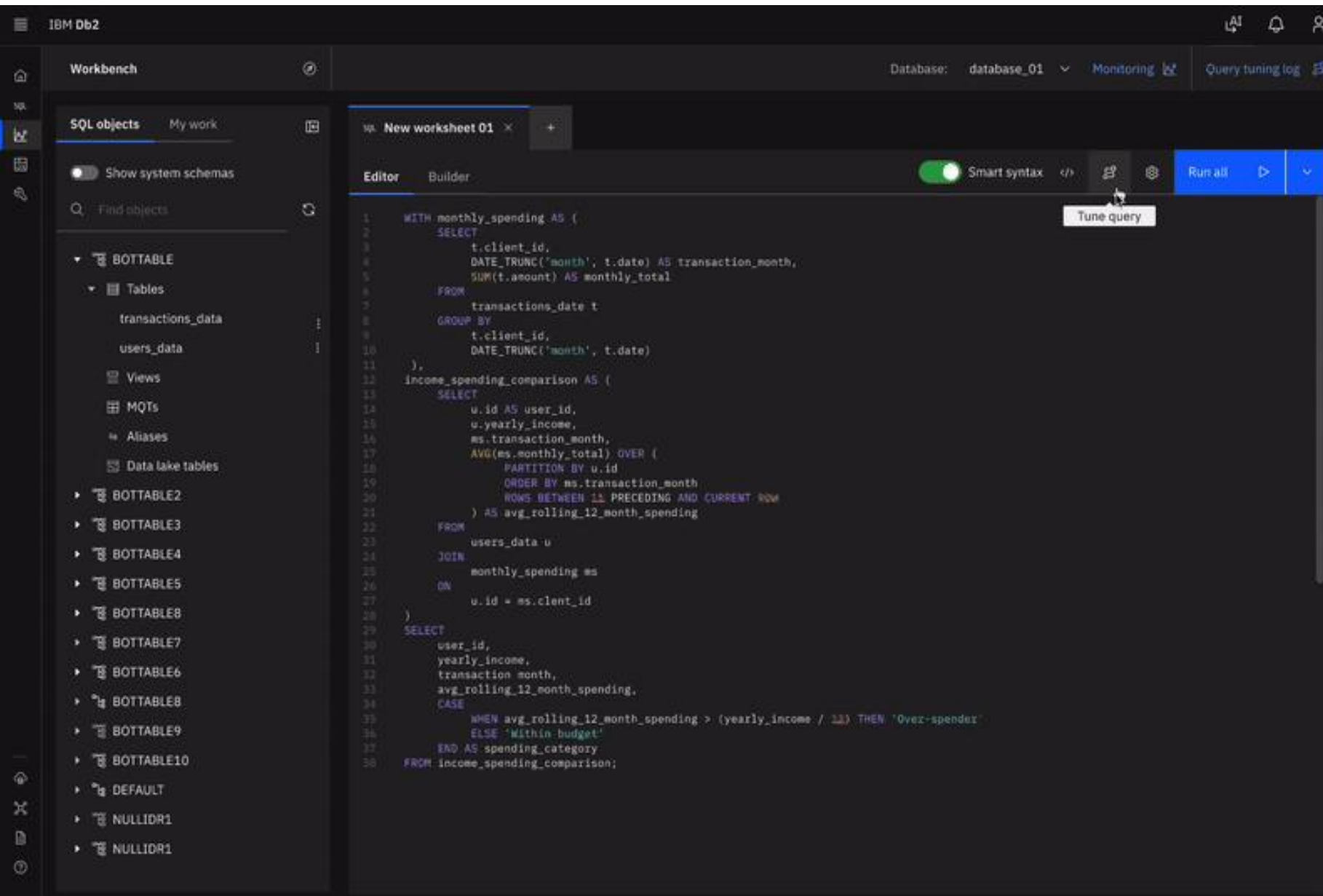


Quickly identify and resolve database issues with powerful drill-downs and real-time insights.

- **Find Problems Faster:** Filter monitoring metrics by query, waits, or hosts to pinpoint issues instantly
- **Spot Issues Before They Escalate:** Get real-time alerts on slow queries, resource spikes, and outages
- **Understand What Changed:** Track historical trends and recent modifications to prevent recurring problems



Query Optimization



Boost performance with AI-powered query tuning and workload analysis

- **Advanced Query Tuning:** Identify inefficiencies and optimize queries with a more powerful tuning experience
- **Enhanced Explain Plan Analysis:** Gain deeper insights into execution plans, resource usage, and performance bottlenecks
- **Smarter Index & RUNSTATS Recommendations:** Improve execution plans with targeted indexing and statistics collection guidance



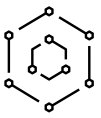
Db2 Configuration Management

Name	Description	Parameter
ACT_SORTMEM_LIMIT	Activity sort memory limit configuration parameter	10
ALT_COLLATE	Alternate collating sequence configuration parameter	None
MON_LCK_MSG_LVL	Monitoring lock event notification messages configuration parameter	Level 1
APPLHEAPSZ	Application heap size configuration parameter	No input text
APPL_MEMORY	Application memory configuration parameter	No input text
APP_CTL_HEAP_SZ	Application control heap size configuration parameter	No input text
ARCHRETRYDELAY	Archive retry delay on error configuration parameter	No input text
AUTHN_CACHE_DURATION	Authentication cache duration configuration parameter	10064
AUTORESTART	Auto restart enable configuration parameter	No option selected
AUTO_CG_STATS	Automatic maintenance configuration parameter	No option selected
AUTO_MAINT	Automatic column group statistics configuration parameter	On
AUTO_REORG	Automatic table and index reorganization configuration parameter	Off
AUTO_REVAL	Automatic revalidation and invalidation configuration parameter	Immediate
AUTO_RUNSTATS	Automatic table RUNSTATS configuration parameter	On

Fine-tune your Db2 configuration settings to match workload demands and maximize efficiency

- **Workload-Specific Tuning:**
Optimize memory, caching, and indexing for peak efficiency
- **Reduce Downtime Risks:** Avoid manual misconfigurations that impact stability
- **AI Driven Recommendations:**
Get recommendations tailored to your current workload based on usage patterns

Coming Soon!



Advanced Task Automation

IBM Db2

Administration / Jobs

Jobs

Create on-demand or scheduled jobs with SQL, DPL, or Shell script to manage your databases.

Jobs

Job chains

History

Custom alerts

Find job

Create job +

☐	Job	Type	Script type	Tags	Created by	Schedule	Last ran	Next run	Status
☐	ta	On-demand	SQL script		admin	N/A	--	--	
☐	newTest	On-demand	SQL script		admin	N/A	--	--	
☐	testg	On-demand	SQL script		admin	N/A	--	--	
☐	test	On-demand	SQL script		admin	N/A	--	--	

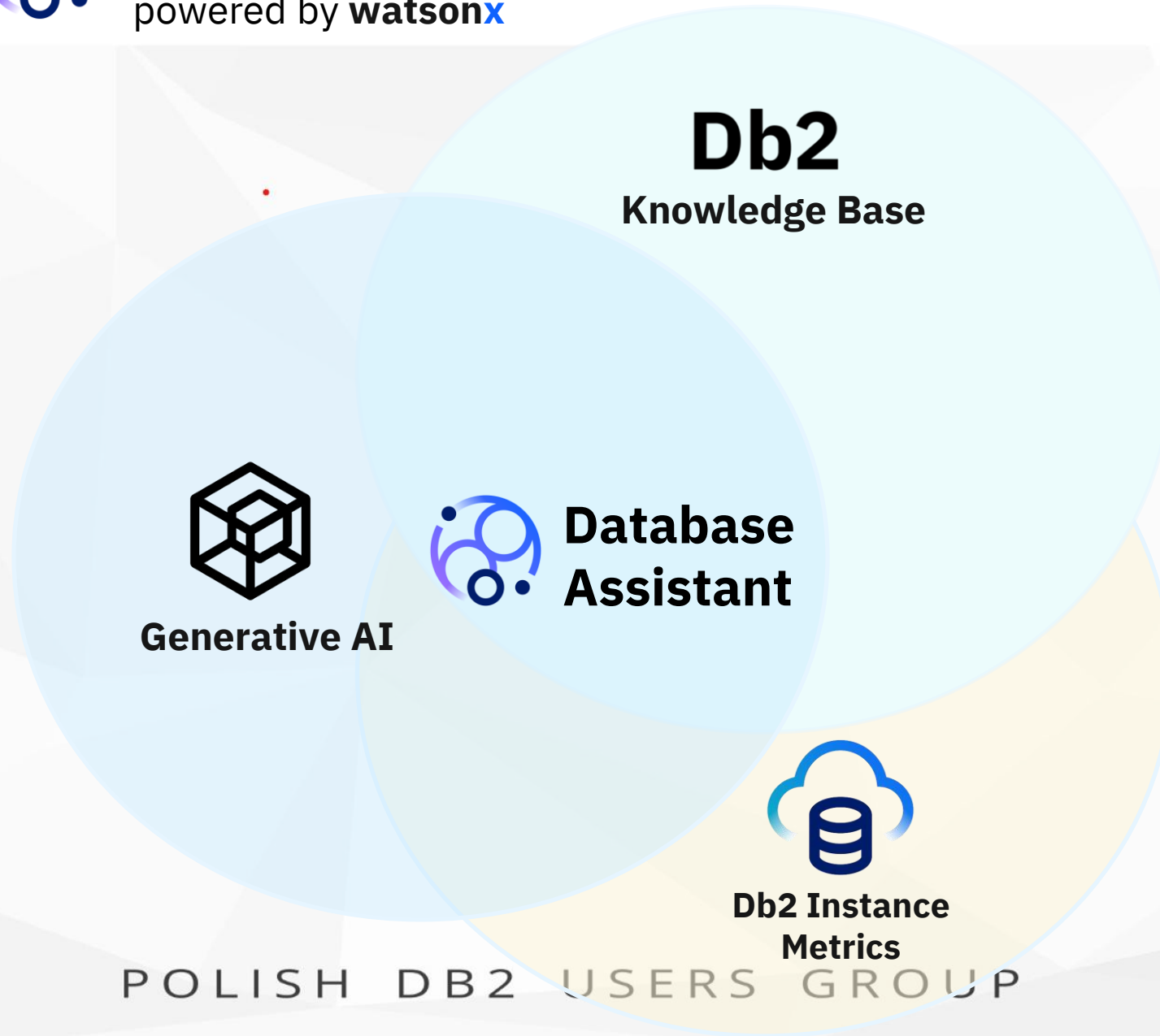
Streamline operations with powerful scripting, scheduling, and task automation to save time and reduce manual effort

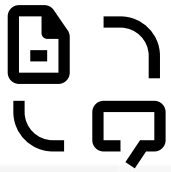
- **Advanced Scripting** – Automate repetitive queries, maintenance workflows, and data exports
- **Task Scheduling** – Run automated jobs for report generation, data movement, and performance monitoring
- **Custom Workflows** – Define and execute multi-step automation for complex database tasks
- **Reduce Human Effort** – Minimize manual interventions for routine administrative tasks



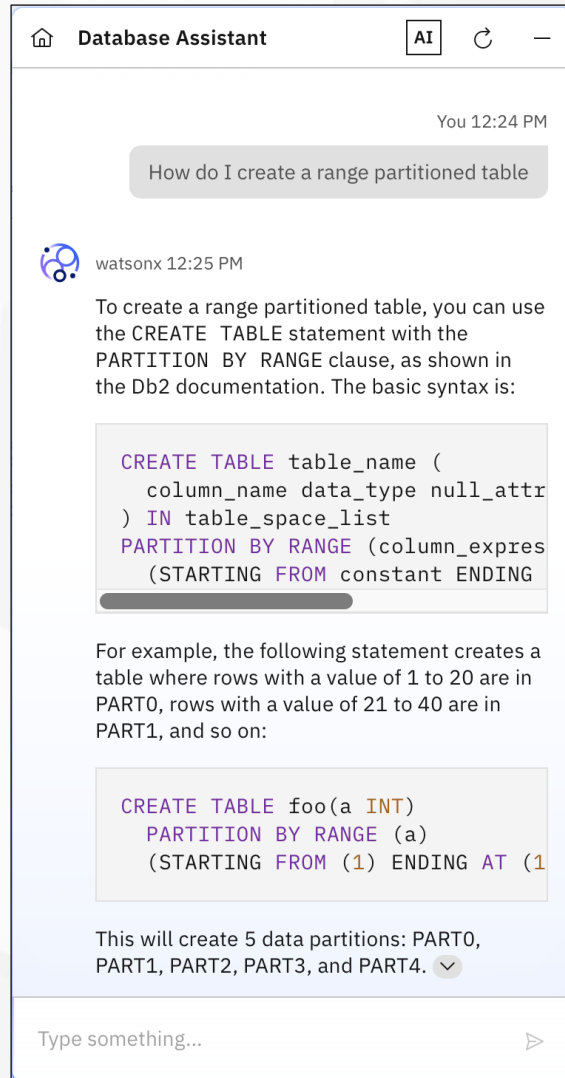
Database Assistant

powered by **watson**x





Db2 Expert



Finding the answer to database questions can be challenging.

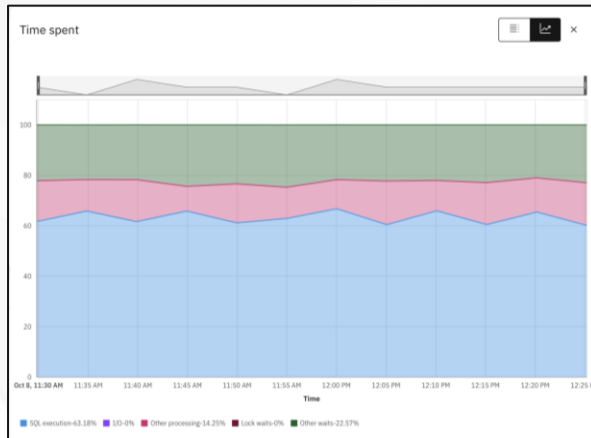
Quick Answers: Type your database question into the chatbot and get immediate, expert-level advice.

Tailored Solutions: Responses are tailored to your specific Db2 version.

Trustworthy Sources: Database Assistant provides source documents to ensure you have reliable, accurate information.



Monitoring Metrics



Database Assistant

AI

You 12:26 PM

Show me the summary of time spent on the database

watsonx 12:26 PM

Here is how time is being spent on your system from October 8, 2024 11:26:58 AM to October 8, 2024 12:25:58 PM .

Time spent

See information about how time was spent on your system

[View details](#)

👍 👎

Type something...

Need to check on key Db2 metrics without digging through dashboards?

Instant Access: Check key database metrics instantly using natural language queries.

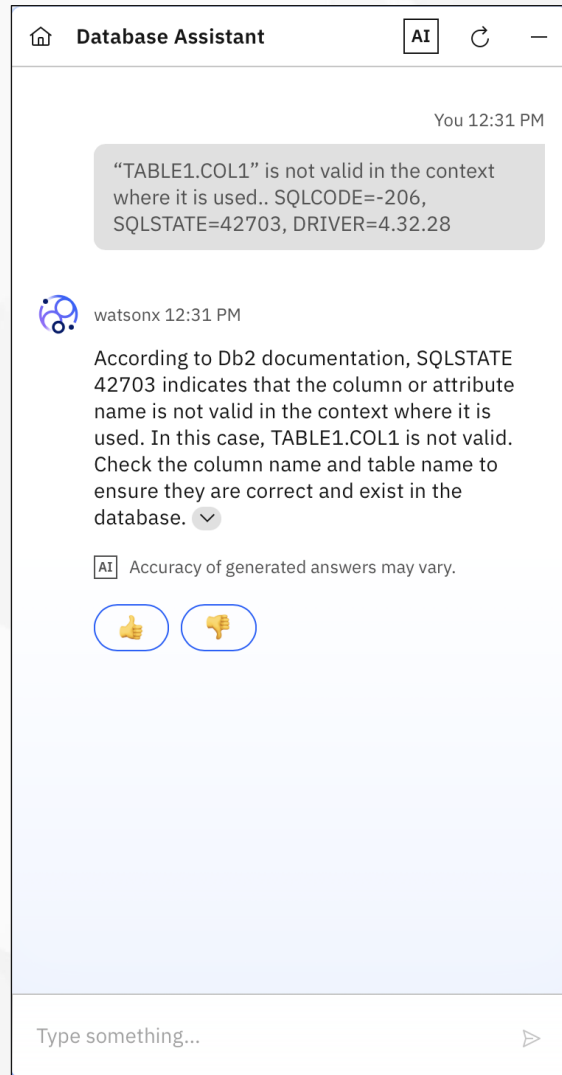
Filter by Time: Refine results by specifying a time period.

No Dashboards: Avoid complex dashboards and menus—get the exact data when you need it.

Proactive Management: Gain real-time insights to resolve issues faster and optimize performance.



Troubleshooting



Facing an issue? Describe your problem to Database Assistant

Immediate Recommendations: Describe your issue, and Database Assistant will guide you through the solution.

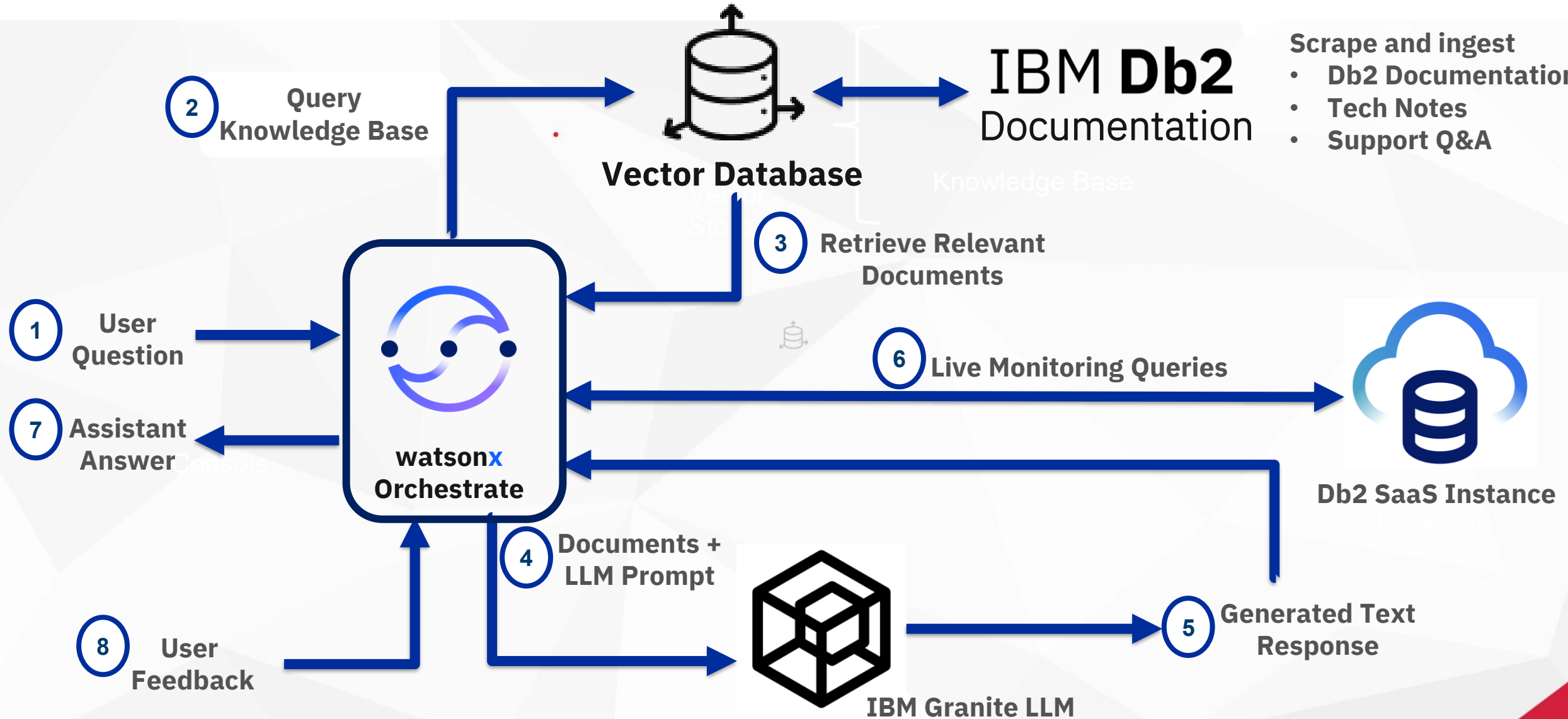
Error Identification: Instantly identify the root cause of errors, minimizing trial-and-error.

Fewer Disruptions: Resolve issues quickly to avoid downtime and operational disruptions.

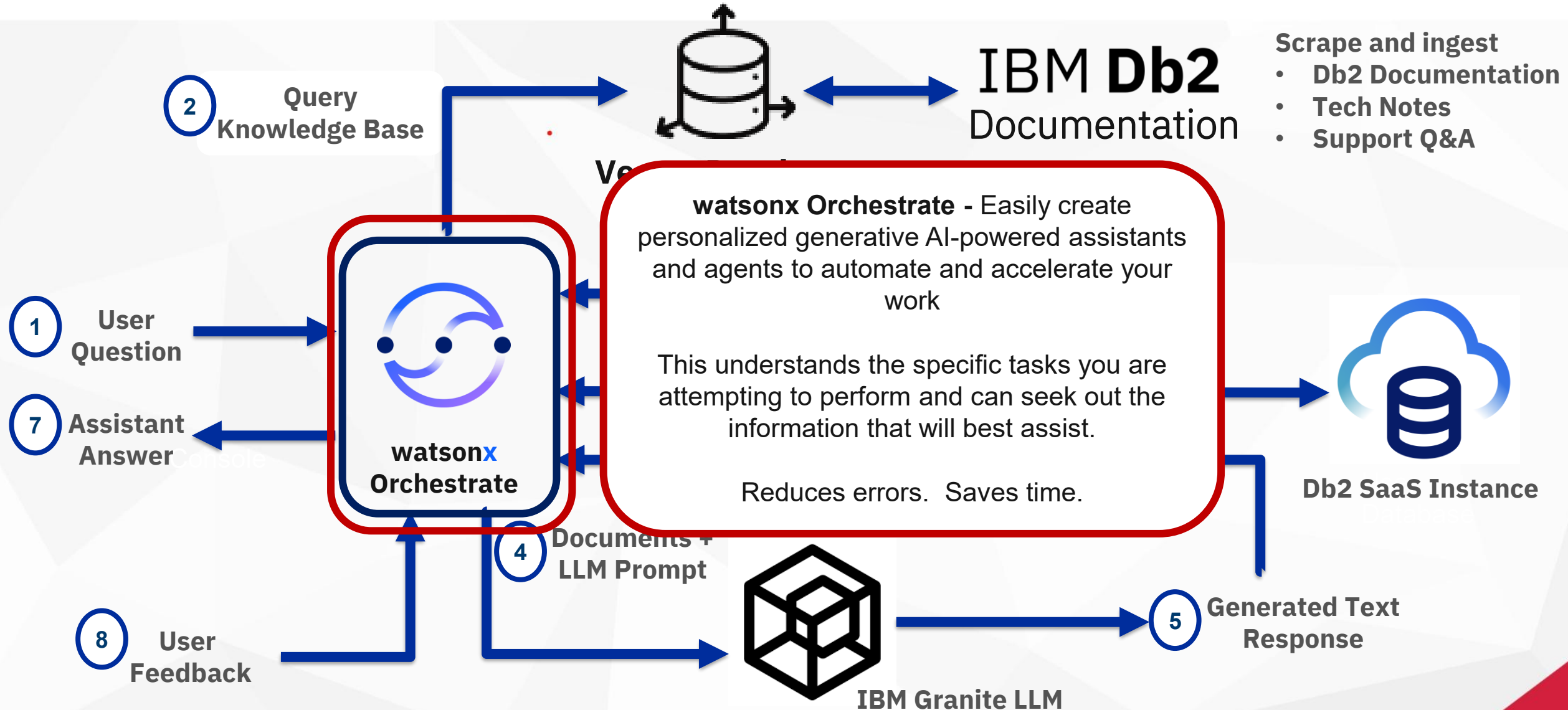
Stay Focused: More time for strategic improvements, less time firefighting technical problems.

Technical Architecture

- Scrape and ingest
- Db2 Documentation
 - Tech Notes
 - Support Q&A

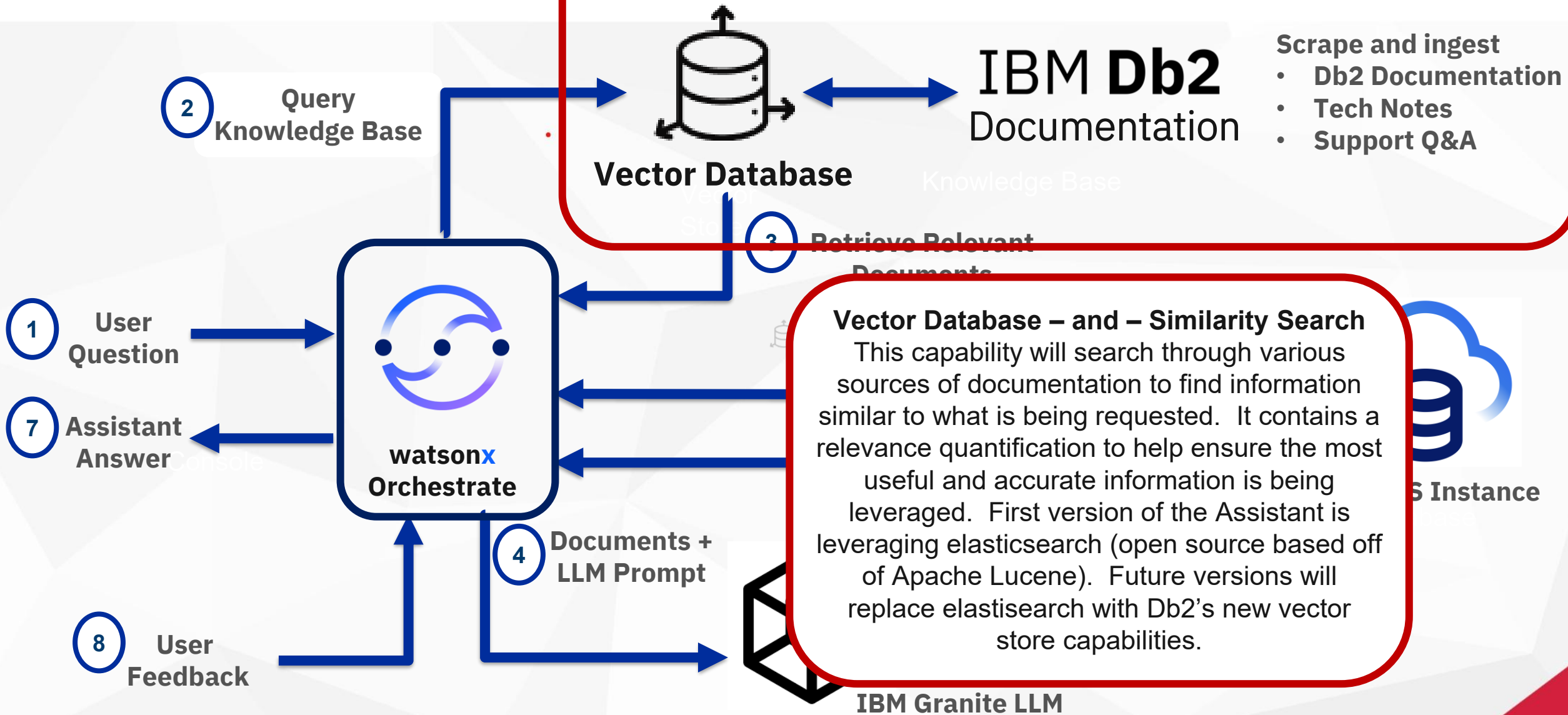


Technical Architecture



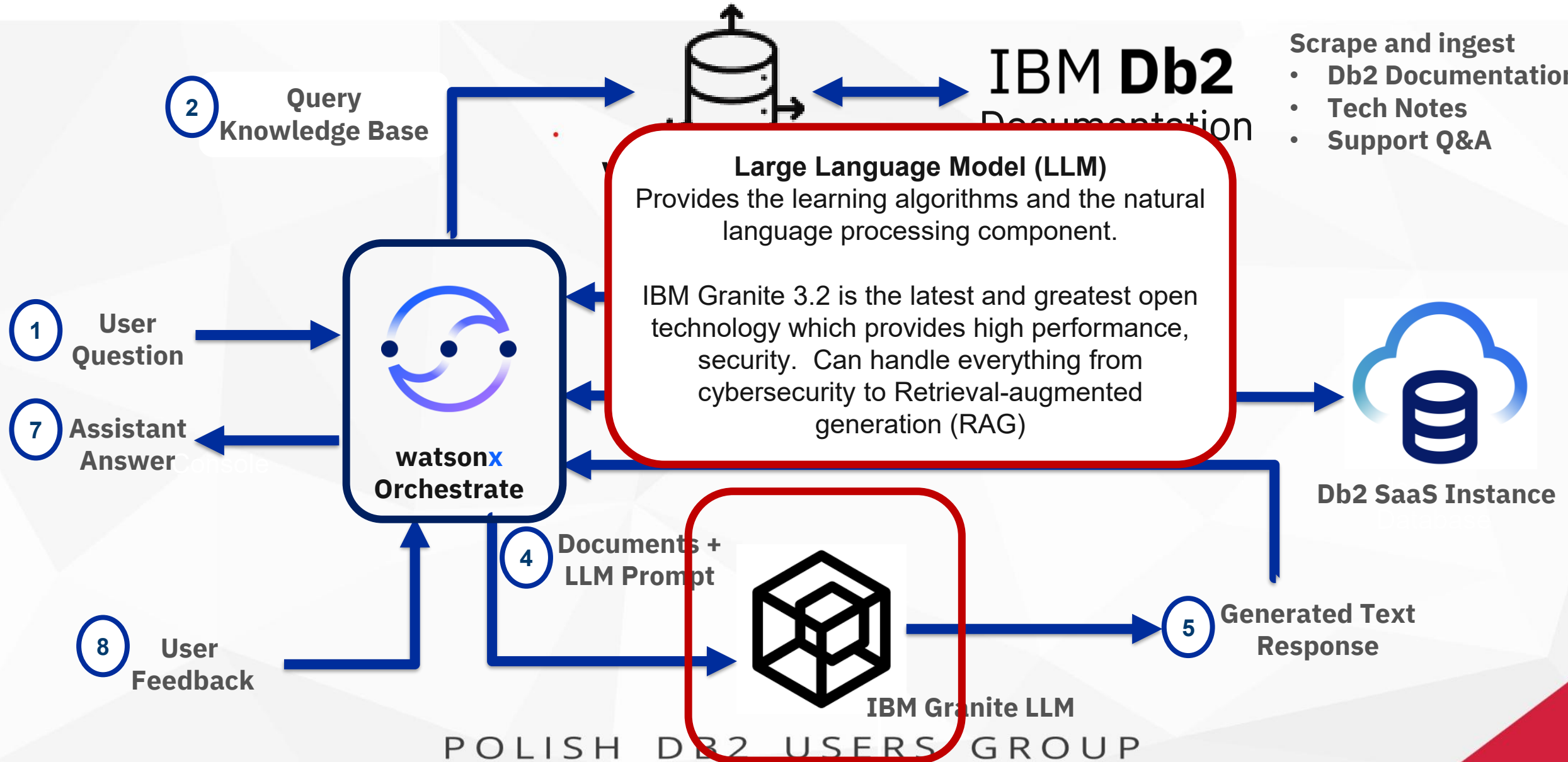
Technical Architecture

PDUG



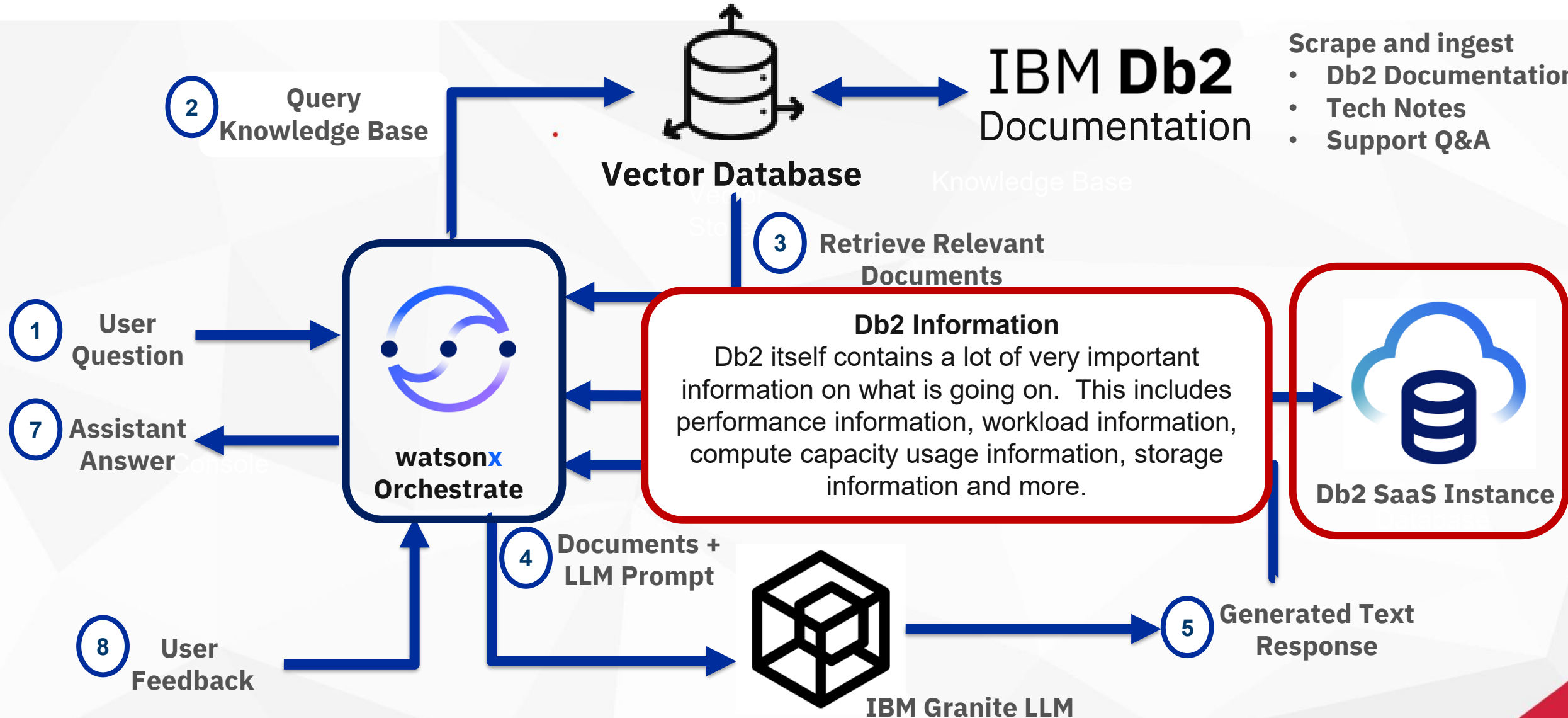
Technical Architecture

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 - Support Q&A



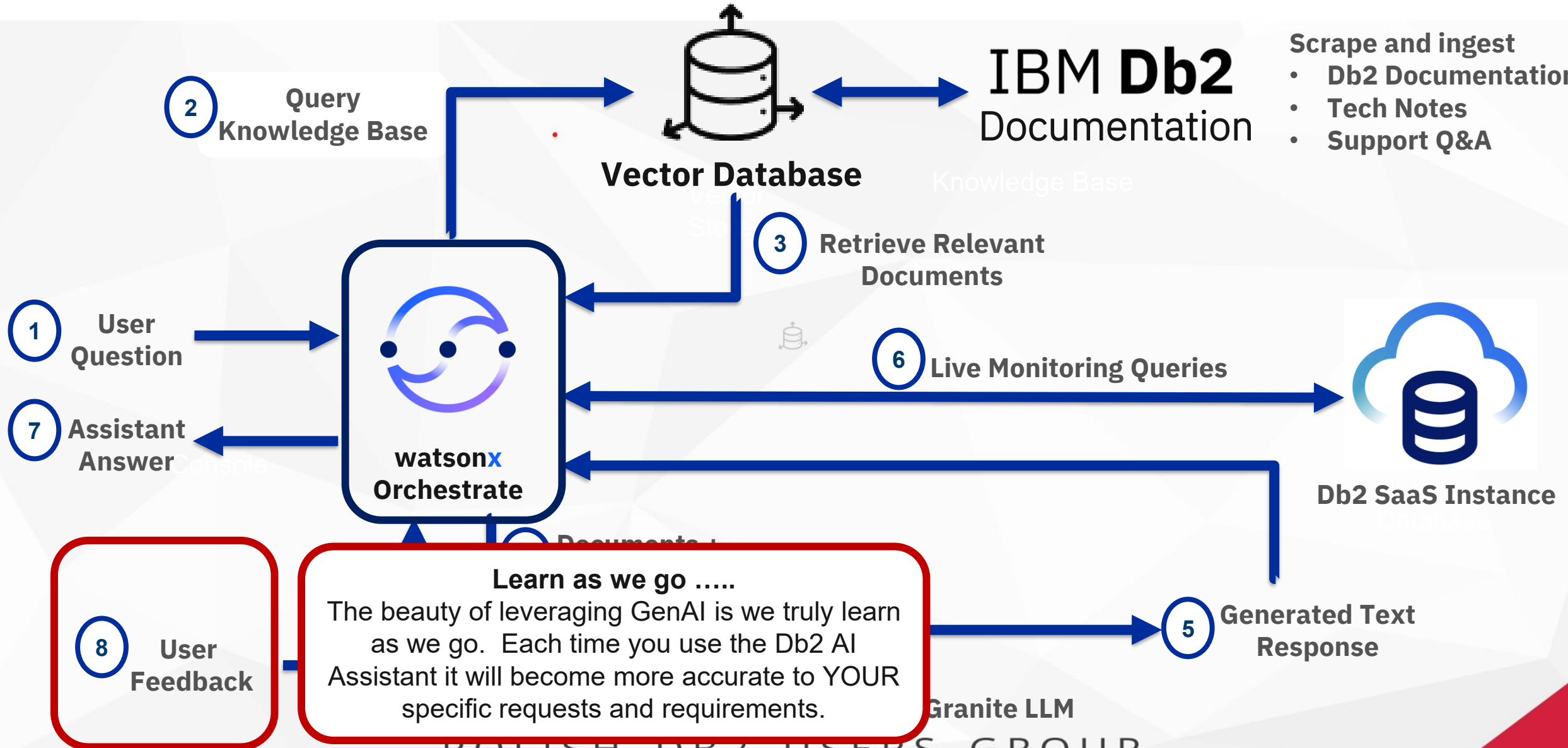
Technical Architecture

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Technical Architecture

- Scrape and ingest
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 - Support Q&A



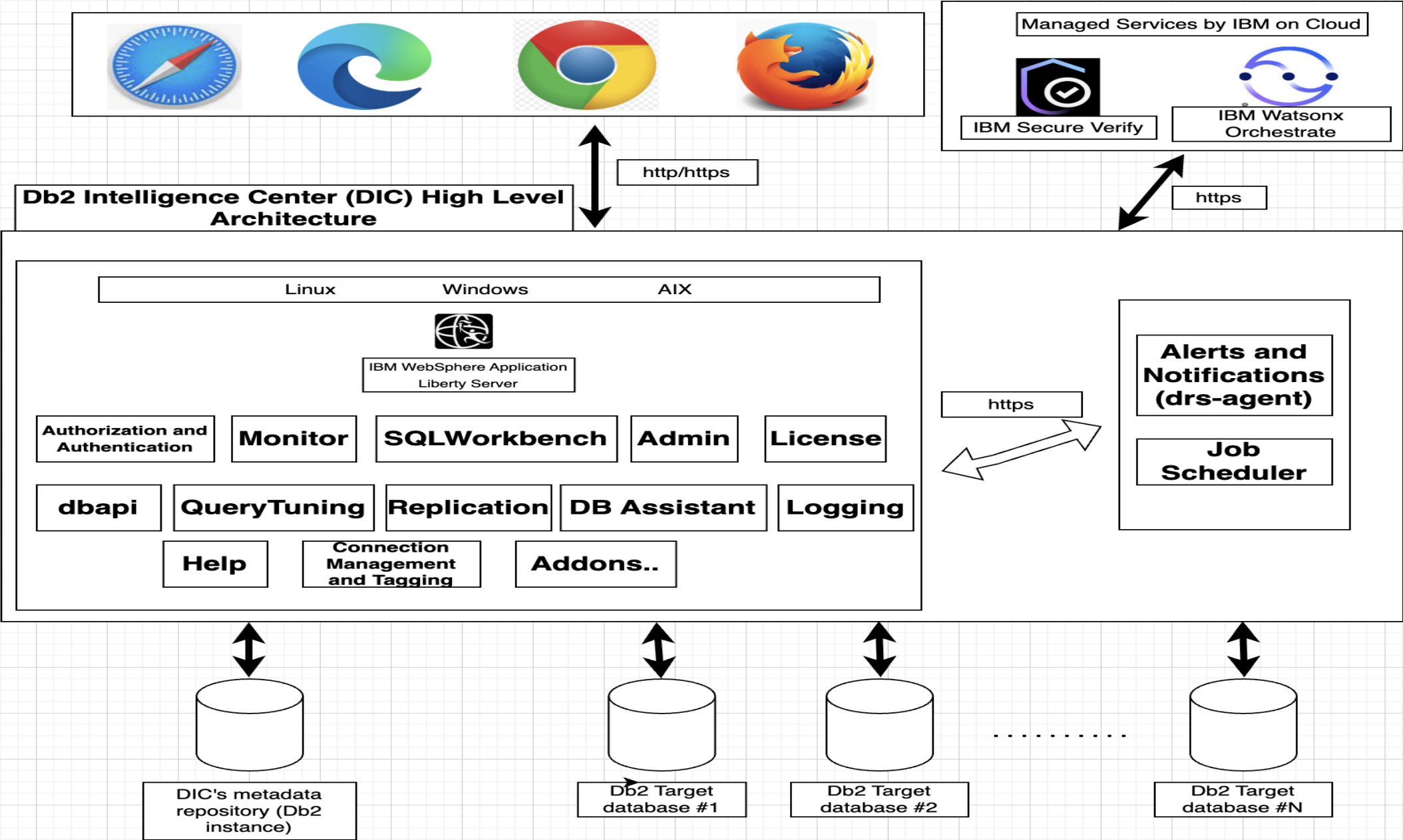


Advanced Analysis

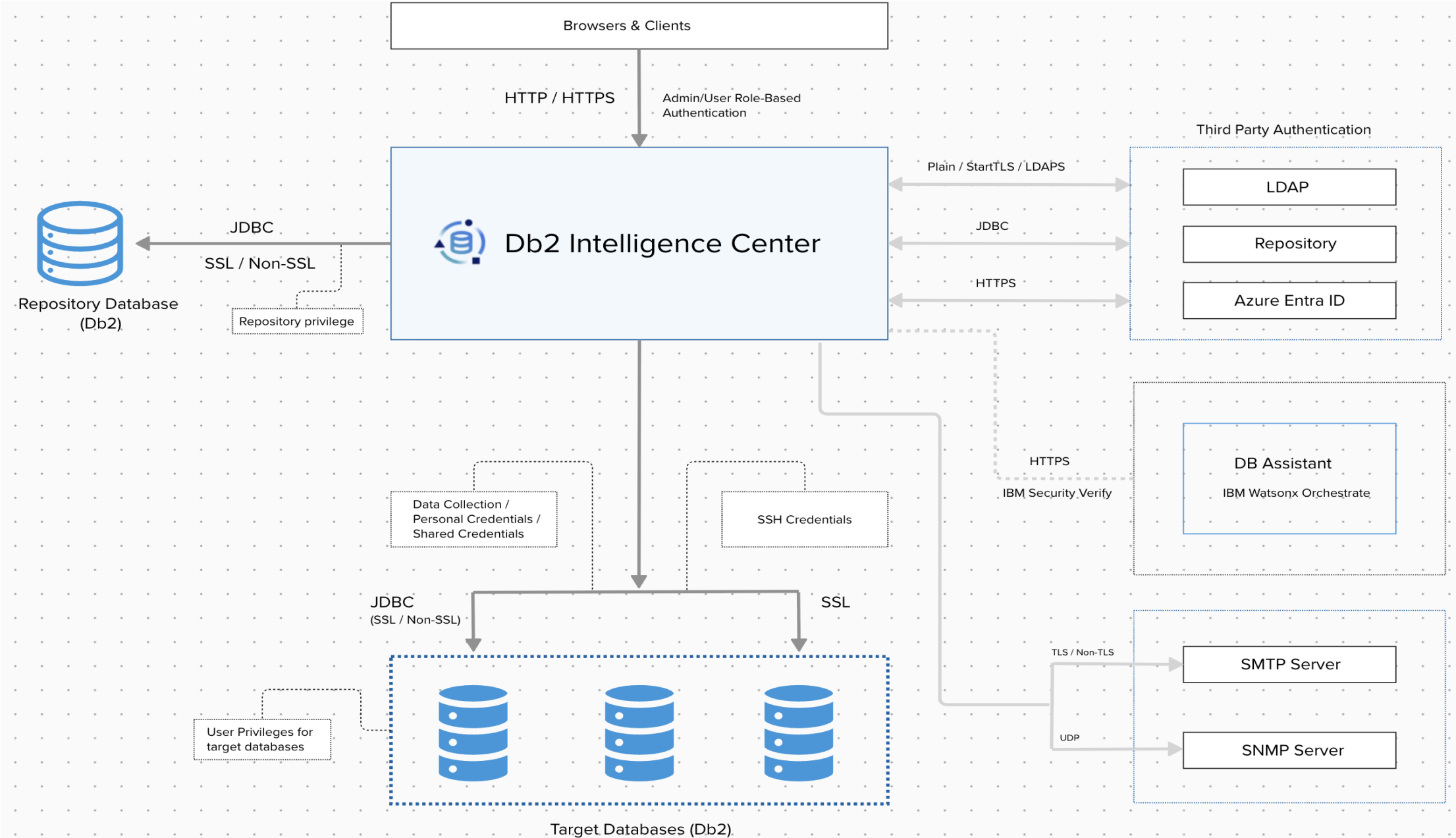
AI assisted advanced tasks including:

- Query tuning
- Index recommendations
- Resolving locking issues
- Resolving blocking transactions
- Resolving blocking queries
- Resolving compression + table skew issues
- Resolving IO performance issues
- Resolving WLM queueing issues

Db2 Intelligence Center - High Level Architecture



Db2 Intelligence Center - Security Architecture





Db2 Intelligence Center

powered by **watsonx**

Launch Announcement
General Availability

5th May 2025 at **IBM Think**
12th June 2025



Db2 Intelligence Center

powered by **watsonx**

PDUG



AI Powered. Less firefighting, more control.

ibm.biz/db2-intelligence-center

POLISH DB2 USERS GROUP



Db2 IC Resources

- 30 days trial link to download Db2 IC : https://ibm.biz/db2ic_eap
- Quick demo of Db2 IC : <https://www.ibm.com/products/db2-intelligence-center>
- Db2 IC documentation : <https://www.ibm.com/docs/en/dic>
- Sandbox for 30 days trial without installing any software :
<https://www.ibm.com/products/db2-intelligence-center>
- Quick installation video : https://mediacenter.ibm.com/media/%5BHow-to%5D+Db2+Intelligence+Center+-+Installation/1_vgdIngyl/22693772



Db2 Bridge

The Data Movement Tool for all your mission critical workloads

Introducing IBM Db2 Bridge



One Data Movement
Approach for all Mission-
Critical Workloads

*Unified data movement
solution for migrating database
workloads, modernizing data
infrastructure and for regular
data movement*

Launched
Feb 5th, 2025

¹ [Data Migration Strategies to Cut Down Migration Costs by 70%](#)

70%

Reduction in migration cost with right strategy and tooling

• Use Cases

Accommodates complex data movement

Schema-level selection of objects
Supports Row/Columnar organization, Little/Big Endian formats & all object types, security labels privileges and authorizations

Move workload with Db2 as target

IBM Db2
IBM Db2 Warehouse
IBM Sailfish IIAS (Source Only)
Power 10 Cloud Rack (Target Only)
Db2 Data files

Support all possible deployment options for Db2

On-prem to On-Prem
On-prem to Cloud
Cloud to On-Prem
Cloud to Cloud

• Key Features



Data Integrity

Preserves data integrity by analyzing the dependencies between objects



OS agnostic

Db2 Bridge is not impacted by operating system differences such as endianness.



Multiple Db2 Versions

Support for Db2 versions as far back as 10.5 and as latest as 12.1



Moves all schema objects

Clones all tables, views, procedures, indexes and more



Fast unload with HPU

Ability to enable Optim High Performance Unload

POLISH DB2 USERS GROUP

IBM Db2 Bridge Overview

Data Movement tool to move database objects and data to Db2

Preserves data integrity by analyzing the dependencies between objects

Standalone Software can be installed on Linux (Power or X86)

Supports all Db2 deployments; on-premise or on-cloud; transactional or analytical workloads; includes Db2, Db2 Warehouse, Db2 Warehouse on Cloud, Db2 on Cloud, IIAS (source only), Power 10 Cloud Rack.

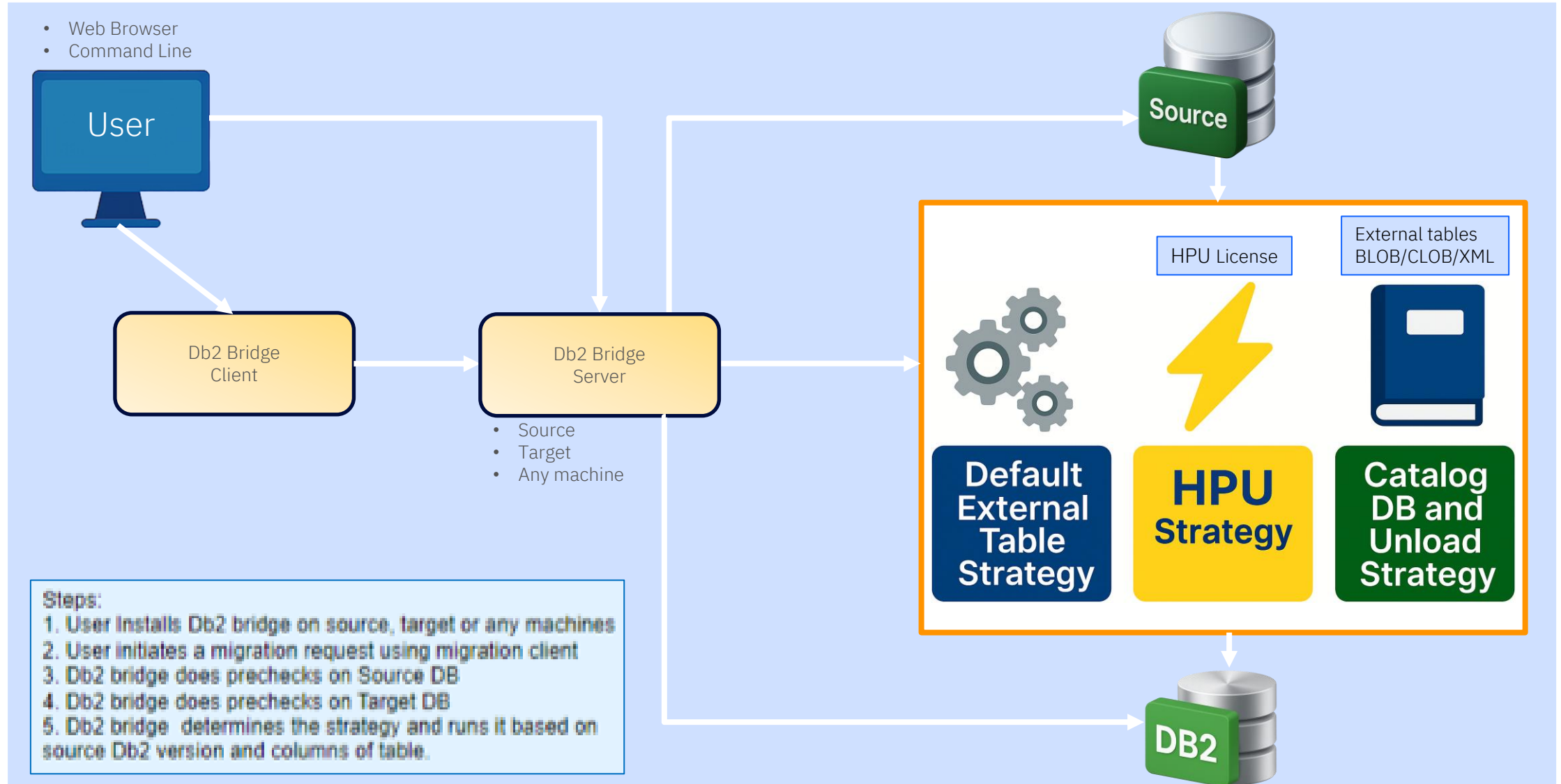
Supports multiple Db2 releases; 10.5 or later for source and 11.5 or later for the target systems

Integration with IBM Optim High Performance Unload for Db2

Database Objects include

- ✓ Aliases
- ✓ Audit policies
- ✓ Buffer pools
- ✓ Check constraints
- ✓ Comments
- ✓ Grants
- ✓ Histograms
- ✓ Indexes
- ✓ PL/SQL procedures
- ✓ PL/SQL functions
- ✓ Roles
- ✓ Sequences
- ✓ Security labels
- ✓ Security label components
- ✓ Security policies
- ✓ Service classes
- ✓ Tables
- ✓ Table spaces
- ✓ Triggers
- ✓ User-defined types
- ✓ Variables
- ✓ Views

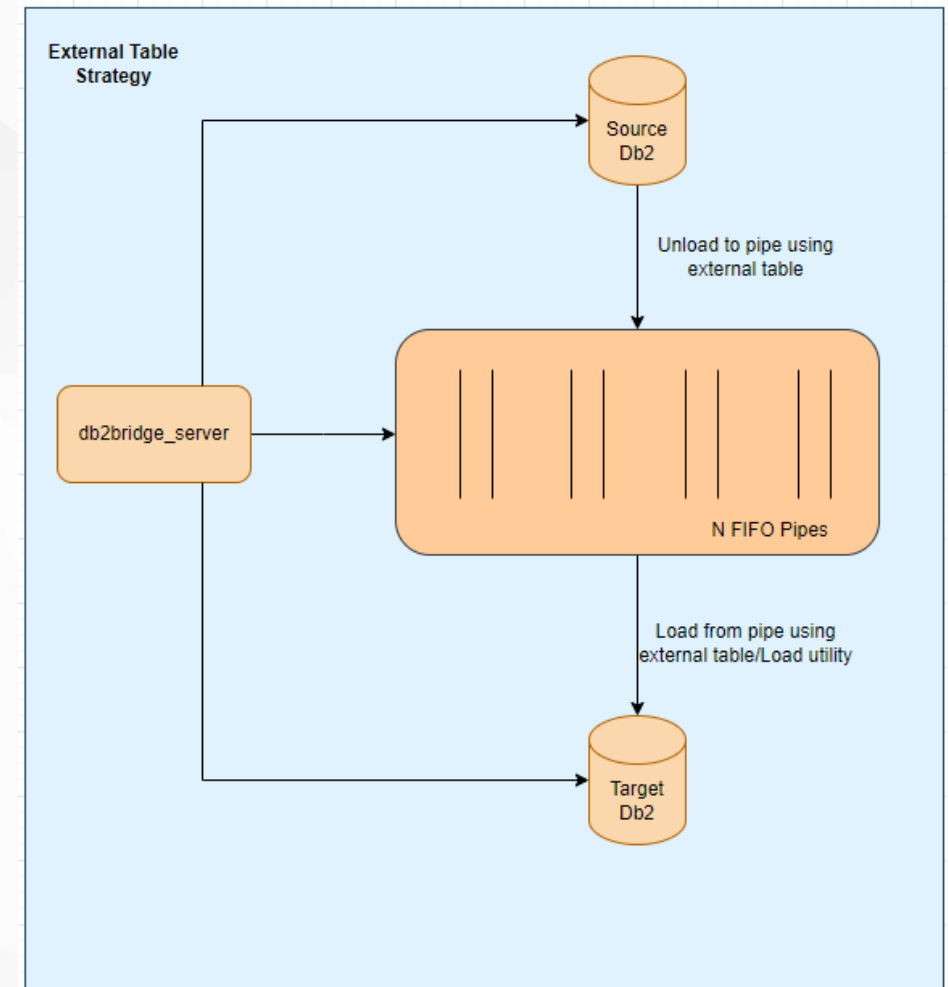
IBM Db2 Bridge Architecture & Data Flow



IBM Db2 Bridge – Architecture

External Table Strategy

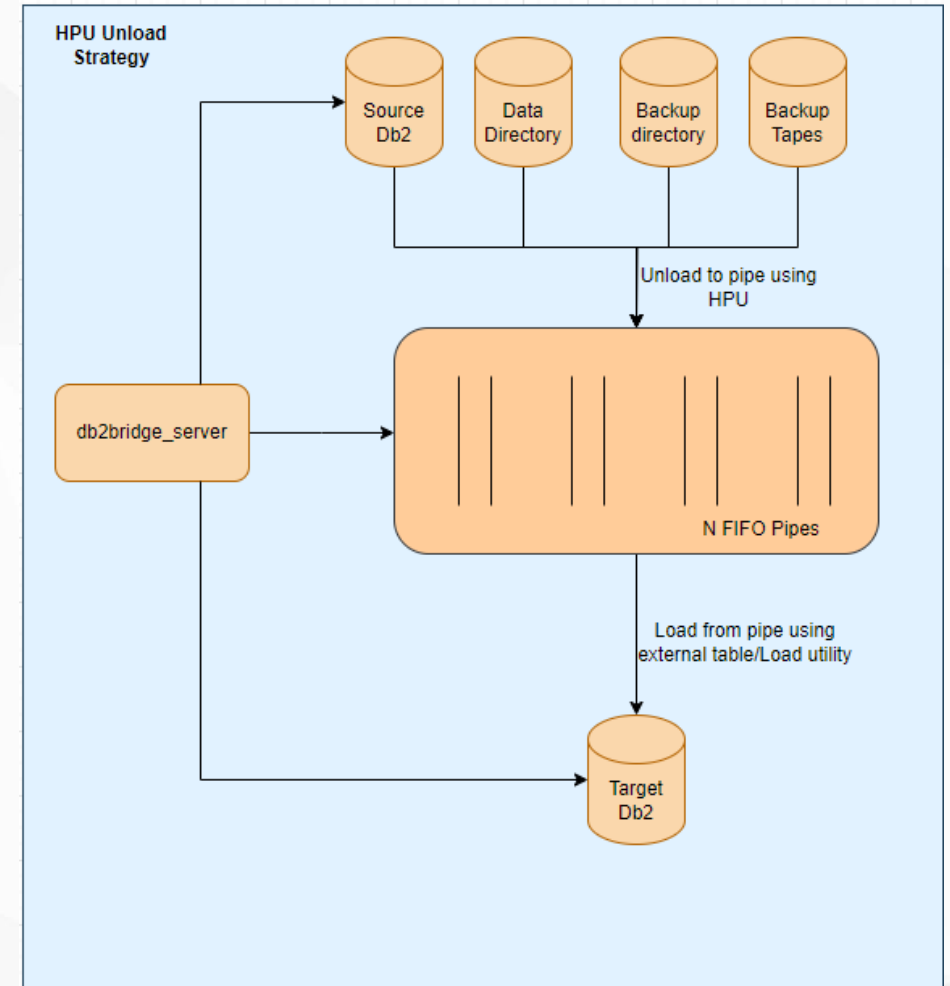
- Default strategy for Db2 Bridge.
- This strategy will be used for migrating from versions greater than Db2 version 11.1
- The number of FIFO pipes is dependent on the capacity of machine in which db2bridge server is installed.



IBM Db2 Bridge – Architecture

HPU Unload Strategy

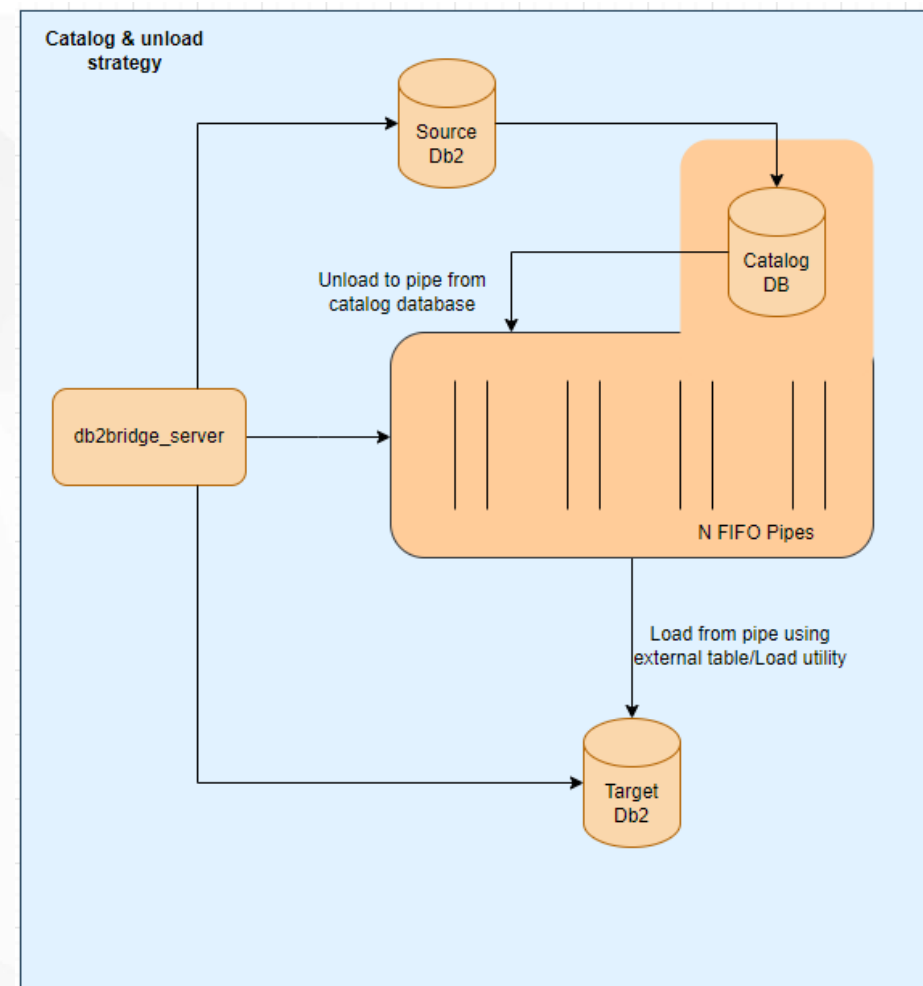
- This strategy is recommended for users who want to leverage HPU for unload.
- When backup directory or backup tapes is used as source, this strategy guarantees a zero impact on the Source Db2 machine.
- This strategy cannot be used if HPU tool is not preinstalled in the Db2 Bridge server.



IBM Db2 Bridge – Architecture

Catalog & Unload Strategy

- This Strategy is used when the source Db2 machine does not support external table or the data contains BLOB/CLOB/XML.
- Db2 Bridge falls back to this strategy if other strategies cannot be used.
- This strategy performance is generally lower than the other strategy describes.



The background of the slide features a dark, isometric grid pattern. On the left, there is a cluster of 3D cubes in various shades of blue and cyan, some stacked on top of each other. A trail of small, semi-transparent purple and blue dots leads from this cluster towards the right. In the upper right corner, there is a dark grey cloud icon with a blue arrow pointing upwards into it. Below the cloud, a series of small blue dots leads to a small, multi-colored cube. The text 'IBM Db2 Bridge' is centered in the lower half of the image, and below it is the tagline 'The Data Movement tool for all your mission critical workloads !'.

IBM Db2 Bridge

The Data Movement tool for all your mission critical workloads !

IBM Db2 Bridge Roadmap

Recently Delivered Q1 2025	Q2 2025	Q4 2025	Q1 2026
Scope the selection: From a source system, the user can select an entire database or a subset of objects. Preserves the integrity of data by analyzing dependencies between the objects. Support for Db2 deployments: Customer should be able to move or migrate the workloads between various Db2 deployments. IBM Db2 Bridge supports various transactional and analytical workloads and all the deployment types on premises or on cloud. Note: IBM Integrated Analytics System (IIAS) is supported as a source system only. Enable High Performance Unload Accelerate migrations and minimize downtime by utilizing IBM Optim High Performance Unload for Db2 (HPU), provided they are already entitled to HPU Supported Interfaces: An intuitive user interface makes it easy for the user to navigate through simple operations such as defining the source and target, selecting objects from the source system to move, running the migration job, and displaying results. A powerful command-line interface provides additional options	Backup & Recoverability: Db2 Bridge to provide table level backup and restore functions of the COPY Utility Specify filter criteria for data: Ability to move only subset of data, to create test environments with a subset of available data. Support for more object types: Support for MQT, Typed Table and Summary tables, WLM artifacts	Ability to synchronize data from source after the initial load. Db2 Health Check: Health Check that would include a feature to analyze and plan upgrade path with newer releases of Db2 Support for more data sources: Support for Teradata as source IBM Db2 Bridge will help in extracting the DDL from source database, evaluate for compatibility with the target database, convert the DDL, run the DDL to create the objects on the target database, and finally load the data into the target system.	Support for more data sources: Support for Oracle as source

IBM Db2 Bridge - Important Links

Try and Buy :

- Trial download [Link](#). This is also our EAP (Early Access Program) that is refreshed with early code drops.
- GA packages are available in Passport Advantage (PA).
- Product comes with try and buy licenses, with a trial period of 30 days.

Product Documentation: Knowledge Center :

<https://www.ibm.com/docs/db2-bridge>

Announcement:

<https://www.ibm.com/docs/en/announcements/db2-bridge-11-delivers-singular-data-movement-tool-your-mission-critical-workloads>

Marketing blog:

<http://www.ibm.com/new/announcements/ibm-db2-bridge-one-data-movement-tool>

Link to the license agreement:

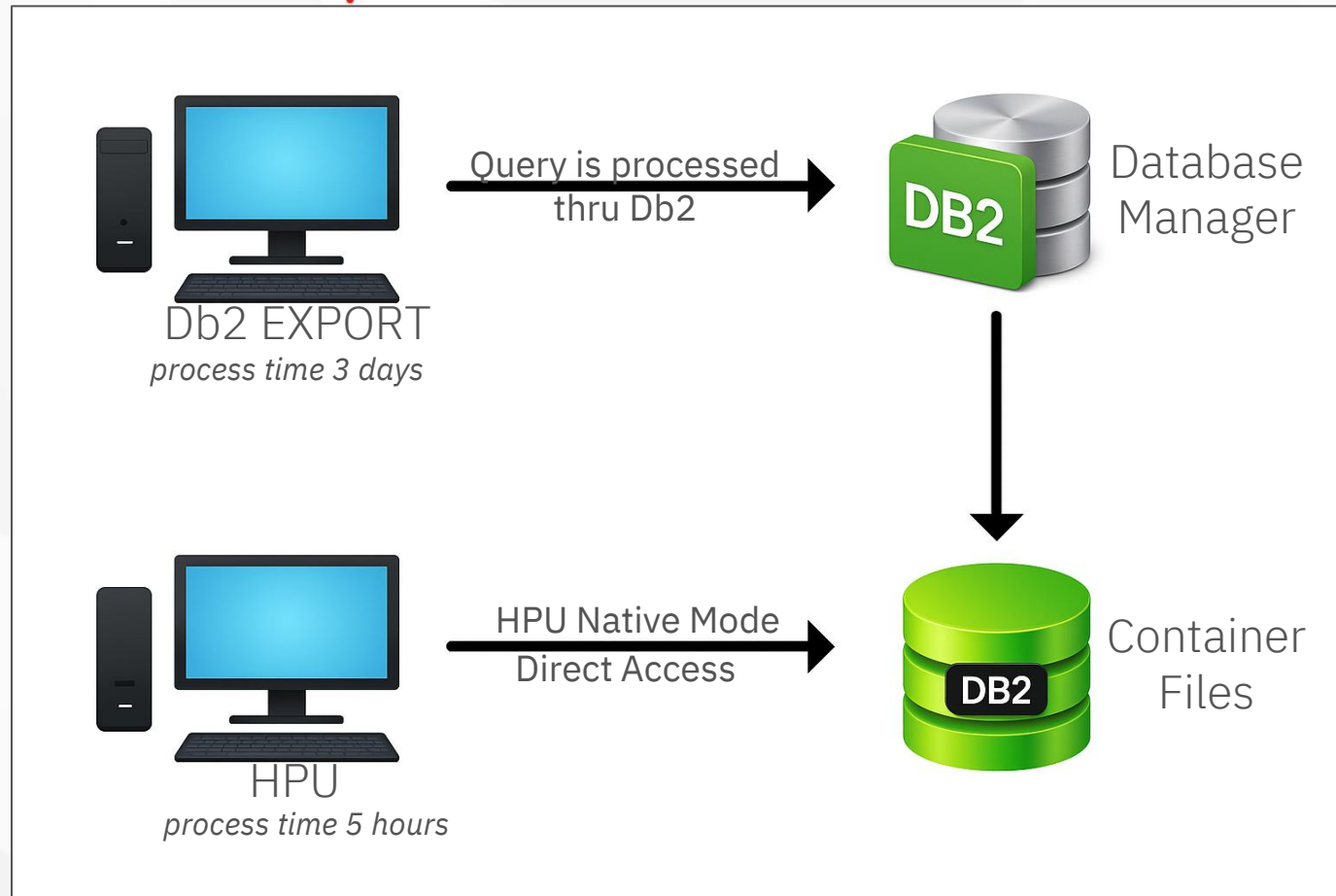
<https://www.ibm.com/support/customer/csol/terms/?id=L-YZJY-YPHA9S>



Optim High Performance Unload

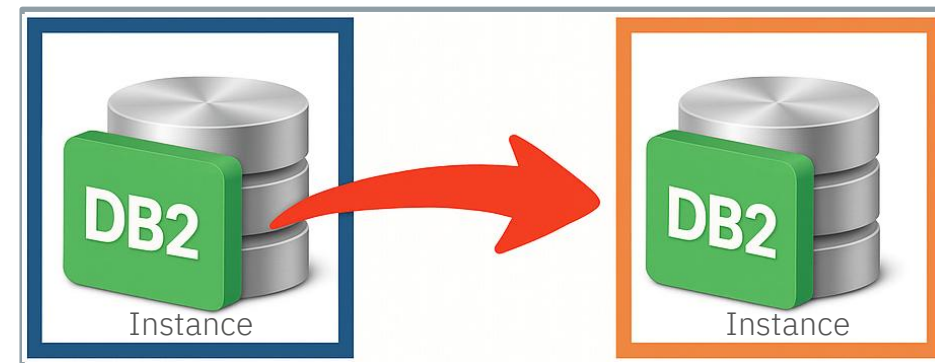
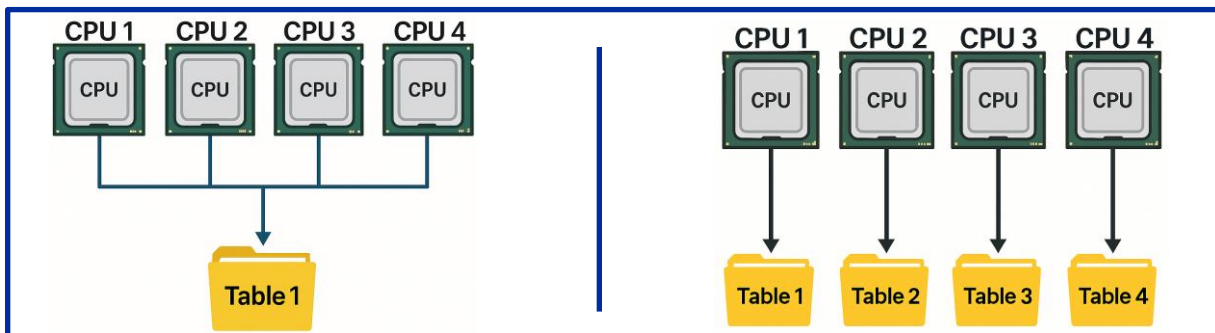
IBM Optim High Performance Unload - Overview

- Can read container files directly - bypasses the database engine
- Scans the data once – avoids multiple table scans
- Unloads data from backup images

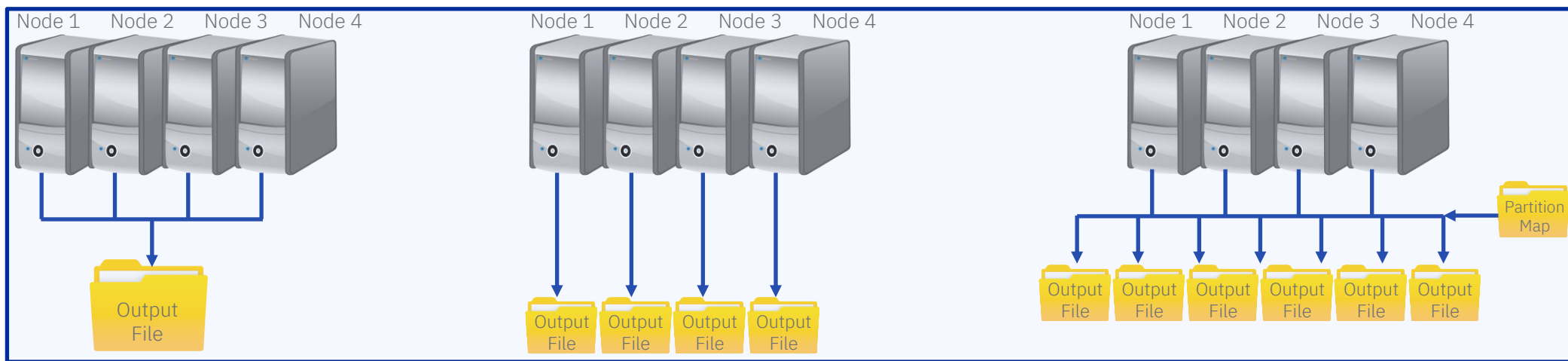


IBM Optim High Performance Unload - Architecture

- Exploits multi-threaded processing – extremely fast



- Complete system migration from one Db2 instance to another
 - Unloading, transferring, and loading the data on the target hosts
 - Little/Big Endian formats
- Flexible database partition support



IBM HPU – New in Db2 12.1

- Support for Db2 V12.1
- Db2 backups taken on a Cloud Object Storage
- IBM Cloud Object Storage as a destination
 - Supported environments using LOADDEST clause
 - ✓ Db2®
 - ✓ NoSQL
 - ✓ Hadoop
 - ✓ Object Storage
 - ✓ PostgreSQL
- Prepare data for S3 environments as a destination
 - Any destinations compatible with the S3 protocol for the external tables relying on a file located in S3 environment
- Additional output formats
 - Parquet
 - ORC (Optimized Row Columnar)
- Monitoring the progression of the activities associated to a running task
- Compressing the data transferred through the network into a remote file using network_compression
- Additional options for the credentials configuration file
 - Secret key to S3 environment
 - Account key of an Azure
- Use of pipes for a data migration based on the AWS CLI tool for S3 environment
- Ability of selecting the range-partitions of a range-partitioned table to be processed through the sequence number
- Db2 environments using Kerberos authentication

Launched
May 14th , 2025



Db2 Merge Backup

IBM Db2 Merge Backup - Overview

Eliminates the need to take full Db2 backups

- Merge multiple offline database or table space backups to build a cumulative single offline database or table space backup
- Merge multiple online database or table space backups to build a cumulative single online database or table space backup

Supported modes

- Normal
 - Merge backups on the Db2 server where the backups were created
- Stand-alone
 - Merge backups on a difference server than where the backups were created
 - Allows you to avoid impact of a production environment

Backup locations supported (source and target can be located on different medias)

- Disk
- TSM
- XBSA
- Vendor Library

IBM Db2 Merge Backup – New in Db2 12.1



- Support for Db2 V12.1
- Db2 backups taken on a Cloud Object Storage
- Monitoring the progression of the activities associated to a running task

Launched

May 14th, 2025



Db2 Recovery Expert

- Recover database objects to a specified point-in-time
 - Avoid using resource intensive disaster recovery
 - Save recovery scenarios for reuse
 - Automatically determine the most efficient method for any given recovery situation
- Analyze database logs
 - Save your report session options for reuse
 - Offload and run remotely
- Generate option executable Redo or Undo SQL to fix data problems
 - With user-specified filters and report range parameters
 - Include optional DDL statements
- Rollback unwanted data changes throughout a database
 - Keep the system online during this time

IBM Db2 Recovery Expert – New in Db2 12.1



- Support for Db2 V12.1
- Enhancing table data decompression process
 - Improvements in the dictionary search within logfiles
 - Elimination of unnecessary log and backup readings
- Improving remote Log Analysis support
 - Enabling access to files located on a storage manager
- Adding integration of Db2 database-level authorities for target databases
- Simplifying the connection process for a remote computer
 - Replacing the unsecure Remote Execution and Access (RXA) library with Apache MINA
- Allowing database upgrade from the Web UI, which previously only supported script upgrades

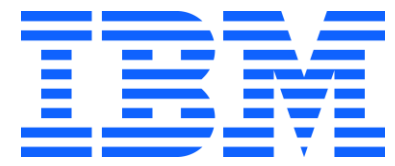
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EMEA Data Management & OEM Technical Sales Leader

marcin.marczewski@pl.ibm.com

LinkedIn: <https://www.linkedin.com/in/marczewski/>



IDUG EMEA – largest technical Db2 event in a year

<https://www.idug.org/events/emea-2025>



IDUG EMEA 2025

-  **Sunday, October 26, 2025** to Thursday, October 30, 2025
-  Hilton Dusseldorf
20 Georg-Glock-Straße
Düsseldorf, Nordrhein-Westfalen 40474
Germany

[Register Now](#)

[Accommodations](#)

**THANK
YOU!**