

# watsonx Assistant for Z – for Db2 Systems Programmers and DBAs

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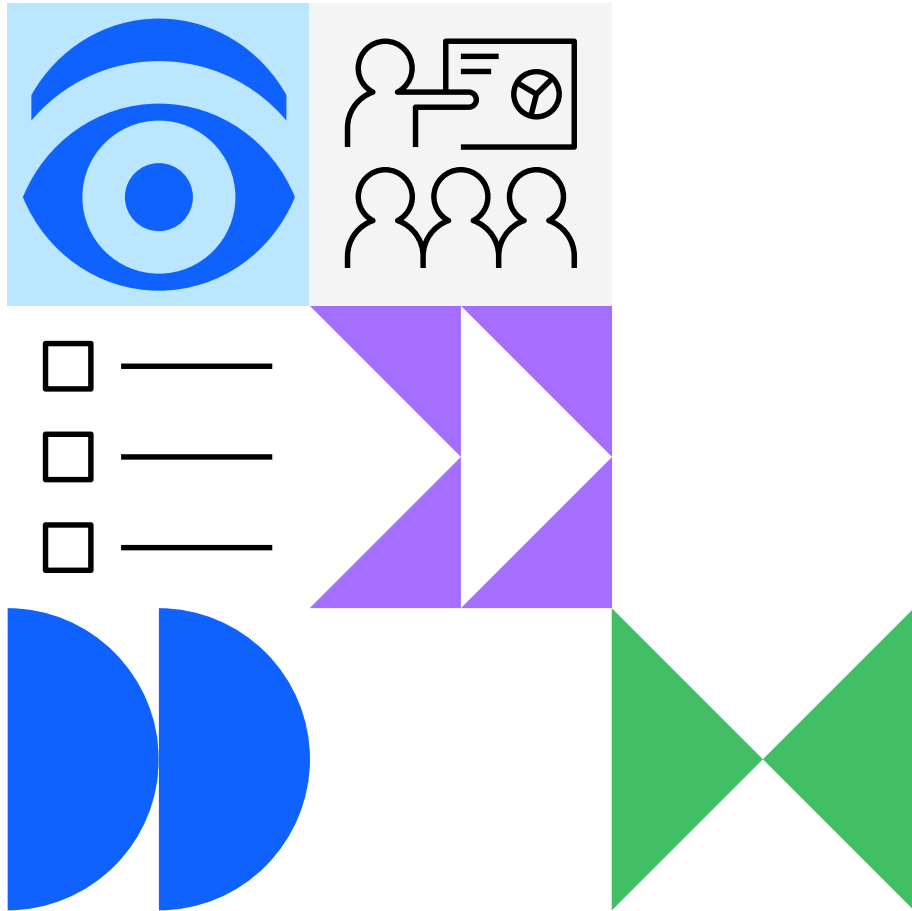
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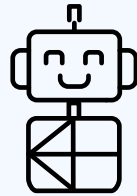
Watsonx Assistant for Z V3

# Generative AI is transforming the way users experience and interact with IBM Z

## Mainframe AI assistant for operations

- Quick and accurate answers to questions
- Execute automation initiated through AI conversation
- Personalize based on job and experience

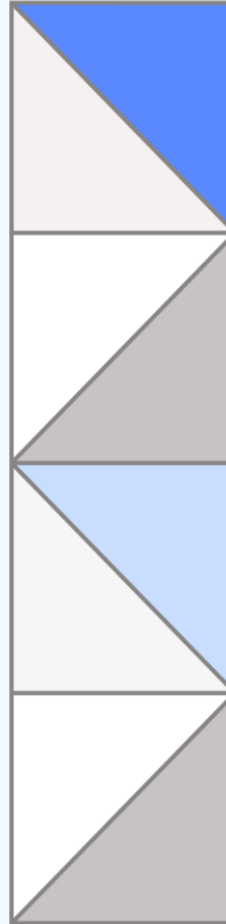
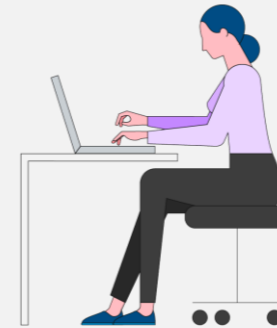
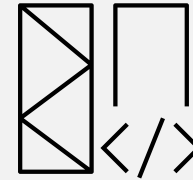
IBM watsonx  
Assistant for Z



## Mainframe AI assistant for application development

- Accelerated application lifecycle
- Code explanation, optimization, & transformation
- Increased flexibility, interoperability, and quality

IBM watsonx Code  
Assistant for Z



### Benefits:

Increase productivity

Reduce learning curve

Increase agility

High quality outcomes

# Pain Points and Objectives

Pain Points	Solution
<p><b>Limited System Visibility</b> A lack of Z environment context aware tools makes it challenging to proactively identify relevant data for error handling, increasing potential performance bottlenecks and risks.</p>	<p>The solution provides DBAs with access to a complete picture of all relevant data, including historical errors and their resolutions, alongside system-specific information..</p>
<p><b>Dispersed Documentation</b> Critical documentation is often stored in multiple locations, making it difficult for teams to quickly access accurate and up-to-date information when troubleshooting or optimizing systems.</p>	<p>The solution integrates with all your data sources wherever they are stored, without requiring replication.</p>
<p><b>High Demand on Senior DBAs</b> Senior team members spend significant time supporting entry level DBAs, managing complex tasks and resolving issues, limiting their capacity to focus on strategic initiatives.</p>	<p>The solution empowers junior database administrators to work more independently, reducing the need for Senior DBA intervention and allowing experienced team members to focus on higher-value strategic work.</p>
<p><b>Steep Learning Curve for early career DBAs</b> New team members often require extensive time and support to fully grasp the intricacies of complex systems, impacting overall operational efficiency.</p>	<p>The solution reduces the time early career DBAs spend on learning activities.</p>

# Pain Points and Objectives

Pain Points	Solution
<p><b>Institutional Knowledge Gaps</b> Key knowledge is often concentrated among senior DBAs, making it difficult for newer team members to ramp up efficiently and contribute effectively without extensive guidance.</p>	<p>The solution captures both general knowledge as well as client specific processes related to system implementation, making critical information accessible to all team members.</p>
<p><b>Manual Processes and Lack of Automation</b> Many routine database management tasks require manual intervention, increasing the risk of human error, consuming valuable time, and reducing overall productivity.</p>	<p>The solution infuses automation to gather relevant data, generate approval workflows, and resolve common errors, streamlining operations and reducing human intervention.</p>
<p><b>Extended Time to Issue Resolution</b> Troubleshooting and collecting relevant data often takes longer than necessary due to knowledge gaps, manual processes, and lack of system context, increasing downtime and impacting service levels.</p>	<p>The solution reduces the time it takes less experienced DBAs to access and resolve errors by providing all relevant information, proven resolution methods and implementations.</p>
<p><b>Lack of Automated Security Framework Integration</b> Client environments are highly regulated with security controls distributed across multiple systems, creating complexity in maintaining consistent access controls and compliance.</p>	<p>The solution manages secure access through Watsonx Assistant for Z to enhance security integration, automate the security authentication process and improve compliance with security requirements.</p>

# IBM watsonx Assistant for Z



## Generative AI responses for IBM Z

Provide an intuitive conversational AI experience for **any** questions on IBM Z and your **enterprise knowledge**.

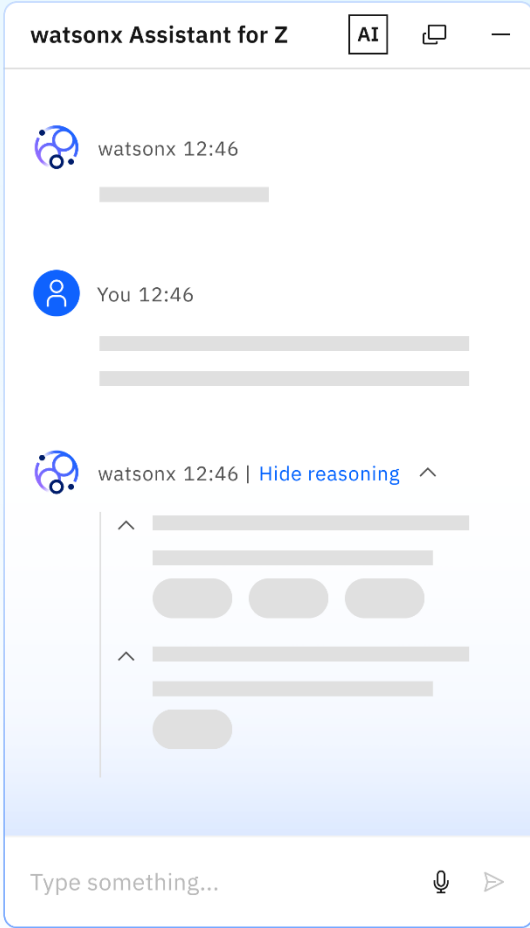
## Integrated automation


Augment the conversation with real-time system insights and **execute context driven automations** on your IBM Z<sup>®</sup> live system.


## Drive more productivity with Agentic AI


Tap into specialized AI Agents during the conversation that collaborate to respond with unique insights and improve decision-making and automation that can perform multi-step processes with minimal human supervision.

7



  
Generative AI responses for IBM Z

  
Integrated Automation

  
Agentic AI

# Watsonx Assistant for Z Scenario

## Context Awareness for Db2 Error Handling

Assist Jr. Db2 for z/OS administrators manage the environment through a chat interface to handle more workloads while minimizing the impact of retirement of the legacy administrators and to avoid senior team members burn-out.

The environment is very large and complex documentation and source documents reside in different places.

- Leverage WXA4Z improve the system discoverability by triaging relevant data sources including institutional knowledge to achieve a precise picture of the system (example: LPARs)
- Leverage WXA4Z skills automate the Db2 for z/OS error handling process including gathering and leveraging historical data for ServiceNow ticket creation, error understanding and error fixing
- Leverage WXA4Z to improve the time-to-resolution of Db2 for z/OS errors

Current Resolution Time:  
~ 1 week

In avg.  
1 out of 5 DBAs  
is experienced

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### Current State

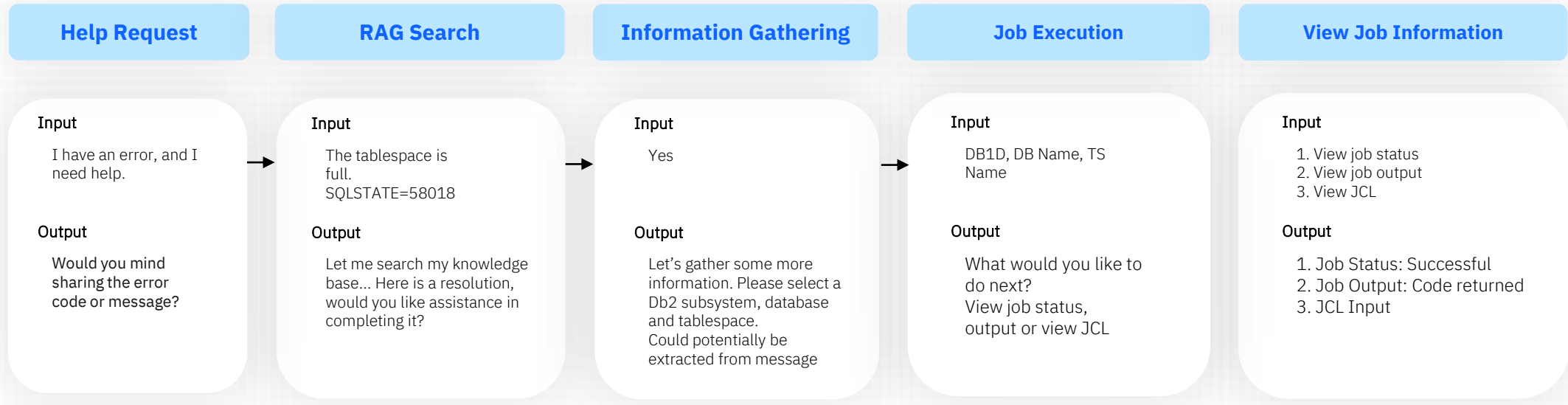
1. Incident ticket comes through
2. Depending on the error scenario, an SME is called at any time of the day
3. SME manually searches for documentation of the same error and documented resolution
4. SME manually looks for appropriate jobs, customizes them for the specific error in the specific system to resolve the error
  - If Junior DBA, may ask for review and permission

# Demo Flow

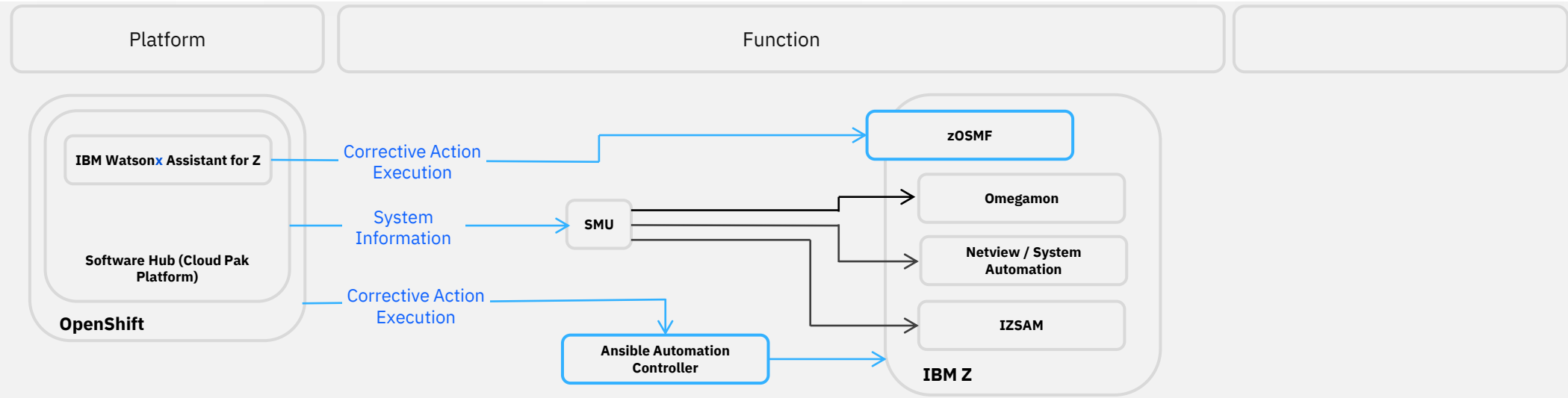
Using RACF IDs & Context Awareness for Db2 z/OS



DBA



IBM Watsonx Assistant for Z



You 1:08 PM

Show all LPARs



Type something...



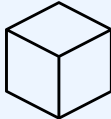
# Technical Evolution

From Standalone Models

to

Agentic Systems

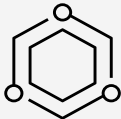
AI that can create for you



## Models

- Problem-solving
- Logical thinking
- Pattern matching

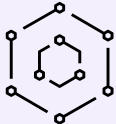
AI that can chat for you



## Assistants

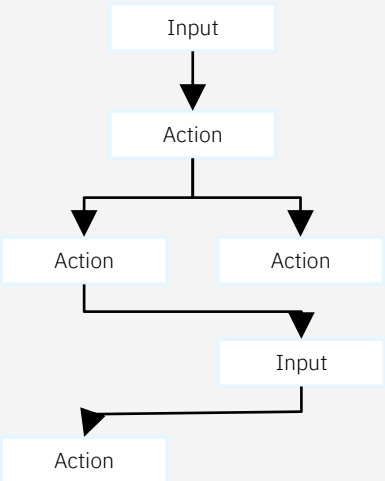
- Information retrieval
- Prescriptive tasks
- Single-step processes

AI that can do for you

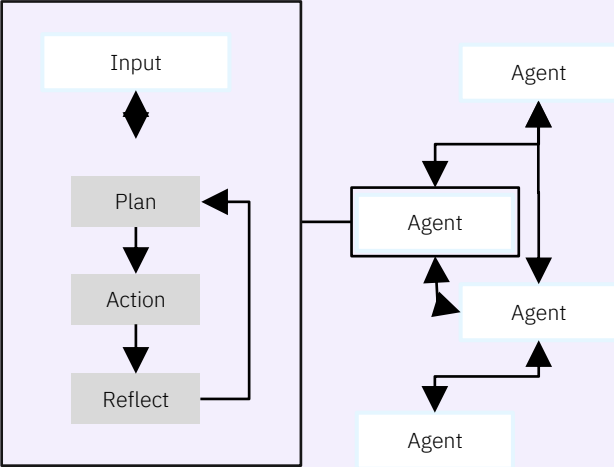


## Agents

- Multi-step processes
- Autonomous actions
- Self-corrections



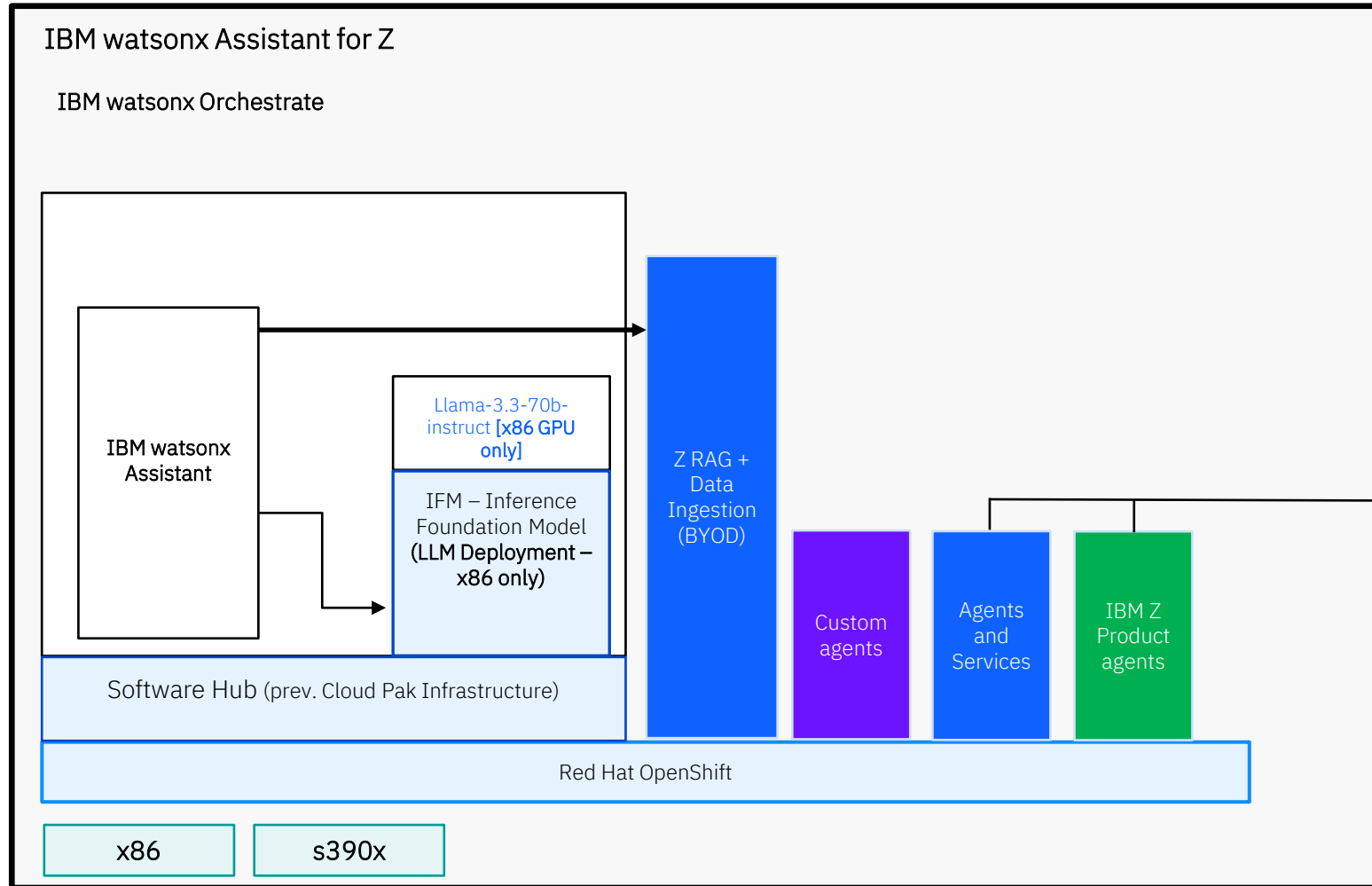
Traditional assistants



Single-agent assistants

Multi-agent assistants

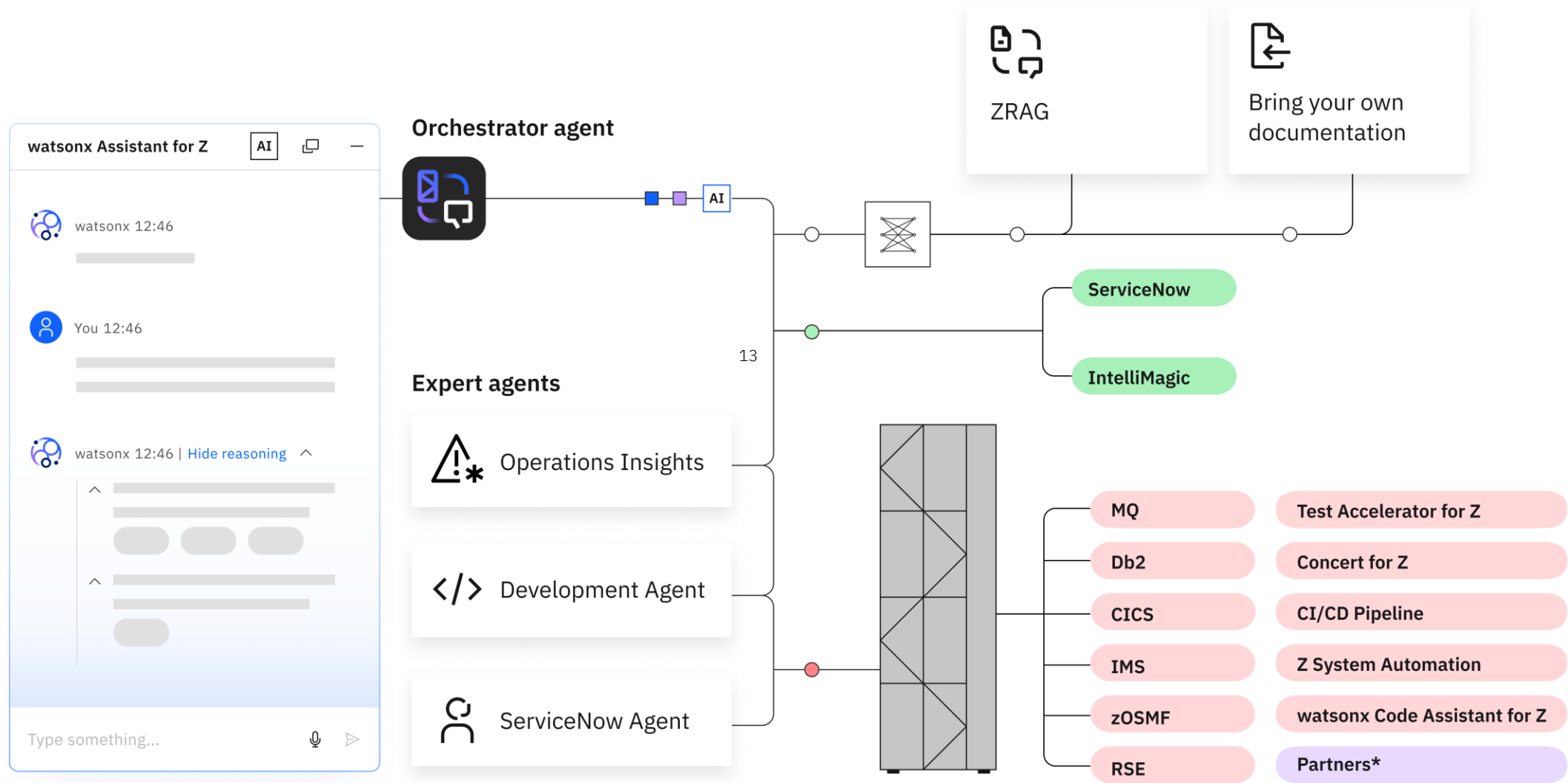
# IBM watsonx Assistant for Z | Architecture



- Operating system
- Specific watsonx Assistant for Z component
- Pre-requirement
- Agents entitled with respective base products
- Created by customer/third-party

# IBM watsonx Assistant for Z

## Agentic vision for IBM Z Platform



# IBM Db2 for z/OS Agent

Ask. Know. Act. — simplifying Db2 for z/OS for everyone.

An [intelligent, conversational assistant](#) that unlocks the power of Db2 — not just for DBAs, but for anyone who needs quick, clear answers. It uses live data to translate complex subsystem information into understandable summaries, using natural language instead of technical syntax.



## Ask

in plain language—no commands.

- ✓ Instantly retrieve key subsystem insights—no technical syntax required
- ✓ Easily compare configurations and thresholds across multiple Db2 systems

### Example:

*“is my data sharing group members ready to be migrated?”*

”

Or

*“what are the local & group buffer pool settings across all my Db2 subsystems?”*

### Impact:

Accelerate new talent onboarding - New hires become productive with Db2 systems in weeks, not months, dramatically reducing your skills gap risk.



## Know

what matters—instantly.

- ✓ Turn complex subsystem data into clear, comprehensible insights
- ✓ Understand performance, usage, and configuration at a glance

### Example:

*“are there issues starting with DSNV or DSNJ in my syslog?”*

Or

*“what critical alerts or warnings in my <Db2-subsys-name>?”*

### Impact:

Accelerate business decisions - Transform complex technical data into executive-ready insights, eliminating the translation bottleneck between IT and business stakeholders.



## Act

with confidence and speed.

- ✓ Get timely AI insights that help you spot issues faster and make informed decisions.
- ✓ Optimize performance and compliance effortlessly across systems

### Example:

*“what should I do to improve system performance right now?”*

”

Or

*“are there differences across configuration parameters amongst members of <group-name> data sharing group?”*

### Impact:

Reduce Mean Time to Resolution (MTTR) - Real-time guidance transforms insights into immediate action plans, proactively identifying and resolving issues before they impact operations.

## The Challenge

Your Db2 for z/OS subsystems are a goldmine of critical data, but accessing insights requires specialized expertise, complex commands, and hours of manual analysis. Meanwhile, your business needs answers in minutes, not hours.



I'm an passive automated agent.  
i.e., I offer advice, you're in charge — no ego,  
always here to help.

Supported Platforms:  
x86 and s390x (Linux on Z)

“What used to take hours and an expert now takes seconds and a question.”

## Why? / Why Now?..

Investment in generative AI is expected to [grow 4x over the next 2 to 3 years](#) — but it remains a small fraction of total AI spend.



Customers today expect seamless experiences and fast answers to their questions, and companies that fail to meet these expectations risk falling behind. 89% of enterprise decision makers agree that [scaling AI leads to competitive differentiation](#).

## Prerequisites

Db2 13 for z/OS\* | WXA4Z 3.0

\* Available as optional add-on at no extra charge

# Use Cases - Walkthrough

Category	Prompt / Query 	Response / Outcome 
Retrieving System Information	<i>Show me all the bufferpools under DBD1.</i>	Lists all bufferpools in the specified Db2 subsystem
<span>Bufferpool</span> <span>SystemInfo</span> <span>RuntimeStatus</span>	<i>Can you tell me details about BP32K?</i>	Retrieves configuration and usage details for the specified bufferpool
Comparing System Information Across Subsystems	<i>List only the different local bufferpools between DBD1 and DBC1.</i>	Compares local bufferpools and shows only differences
<span>Bufferpool</span> <span>SystemInfo</span> <span>Comparison</span>	<i>List only the different group bufferpool between DBD1 and DBC1?</i>	Returns “Unavailable” because alias1 and alias2 are standalone systems, not in data sharing
Retrieving zParm Values	<i>What is the zparm value of UTILITY_HISTORY in DBD1?</i>	Shows current value of the specified zparm parameter
<span>SystemInfo</span> <span>zParm</span> <span>RuntimeStatus</span>	<i>Are there any utilities currently running under DBD1?</i>	Lists currently executing utilities under the given alias
Comparing zParm Across Subsystems	<i>Show me MAXDBAT, CONDBAT, DSMAX, and APPLCOMPAT zparm values for DBD1 and DBC1.</i>	Structured output listing the values of the requested zparm
<span>SystemInfo</span> <span>Comparison</span> <span>zParm</span>	<i>What are the schemas under DBD1?</i>	Lists all schemas defined in the given Db2 subsystem
Catalog Navigation with System Information	<i>What are the indexes under DSN81310?</i>	Lists all indexes within the specified schema
<span>Bufferpool</span> <span>ContextAware</span> <span>CatalogNav</span>	<i>Which table is XCONA1 created for?</i>	Identifies the table that a given index is defined on
<span>SystemInfo</span>	<i>Which bufferpool does XCONA1 use?</i>	Shows which bufferpool is associated with the index
	<i>Can you give me details about that bufferpool?</i>	Fetches detailed bufferpool information related to the referenced index



**Ready to dive in?** This prompt is powered by a fully configured subsystem in TechZone. No setup required — just use it as-is and get started right away.

Watsonx Assistant for Z transforms the Z user's role to be more **streamlined** and **efficient** by enabling them to:



## Reduce Time-to-Productivity

Accelerates onboarding for new mainframe personnel through AI-guided learning

### Key Metrics:

- Onboarding time reduction
- Time to first independent task
- Proficiency assessment scores
- Training hours required



## Preserve Knowledge

Codifies expert knowledge before retirement and facilitates consistent knowledge transfer.

### Key Metrics:

- Expert processes captured
- Critical operations covered
- Knowledge retrieval accuracy
- Transfers without experts



## Increase Operational Efficiency

Streamlines routine tasks and accelerates problem resolution through automated workflows.

### Key Metrics

- MTTR for Db2 errors
- Manual intervention reduction
- Navigation time improvement
- Automated workflows



## Optimize Cost

Lowers training costs and enables more efficient use of senior staff time and resources.

### Key Metrics

- Training cost reduction
- Overtime hours reduction
- Cost avoidance (outages)
- Resource allocation improvement



## Mitigate Risk

Reduces dependency on retiring experts and prevents operational errors through guided assistance.

### Key metrics

- Critical incidents reduction
- Senior staff escalation decrease
- Error rate reduction
- Critical functions coverage



## Enhance Security

Maintains strict security controls while improving usability through seamless authentication

### Key Metrics:

- Authentication failure reduction
- Security compliance rate
- Security admin time saved
- Security incidents reduction

# IBM CIO Office

## Boosting mainframe operations experience & productivity for new Z users

### Need

The key goal of IBM CIO team office is to reduce the skill level required to run their IBM Z environment

### Solution

Implemented IBM watsonx™ Assistant for Z in production and leveraged pre-built skills including ServiceNow and Ansible integration.

### Initial cases

1. Patching Db2 subsystems
2. ServiceNow incident analysis
3. IBM Z Q&A support for operations staff

### Solution components

- IBM watsonx™ Assistant for Z
- Ansible Automation Platform – Red Hat

Concept to value in ~ 4 weeks

*"IBM watsonx™ Assistant for Z is helping us reduce the skill level needed to manage our Z environment. Within just 4 weeks, we implemented three high value use cases. I'm confident that this generative AI assistant will have substantial impact on our Z users' productivity and experience."*

Marianne Serra, CIO  
Z Strategy and Platform IBM CIO Office

50% → 80%

Hours reduction to patch Db2 systems.\*

10% → 30%

Decrease in time for incident resolution.

8% → 35%

Initial learning time saved, optimizing SME usage.

\*Assumes a single patch per year with no rollbacks

\* grey text – outcome H1 2024, Blue outcome Q1 2025 (includes some process simplification)

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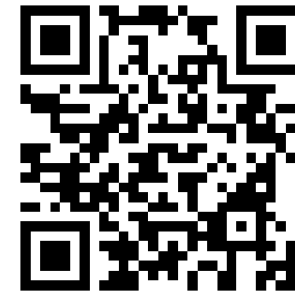
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