

IBM Bob: Premium Package for IBM Z

Mainframe Application Modernization at Scale — Lower risk, less cost, greater efficiency with AI workflows embedding deep z/OS knowledge and IBM mainframe expertise

Mainframe runs the business even today. Billions of transactions. Decades of proven reliability. But the landscape is shifting— hybrid architectures are becoming the norm, mainframe expertise is scarce, and modernization can't wait for a multi-year rewrite.

The challenge isn't whether to modernize. It's how to do it without breaking what works.

Most modernization efforts stall because:

Context loss — Most AI tools lack understanding of mainframe middleware and application dependencies (CICS transaction flows, Db2 relationships, JCL dependencies)

Risk amplification — Changes can cascade across tightly coupled batch jobs, online transactions, and data structures

Knowledge gaps — Decades of business logic embedded in code with limited documentation

Skill shortage — Steeper learning curve for new z/OS developers; experienced developers are retiring

Modernization isn't new and neither is AI. AI capabilities have existed but were often fragmented and limited to isolated tasks. With agentic workflows, AI can now operate with greater context — enabling more coordinated, automated, and controlled approaches to modernization.

This is where the **IBM Bob Premium Package for Z** comes in — extending IBM Bob with deep mainframe expertise to bring efficiency, productivity, and intelligence to the IBM Z development lifecycle. It integrates and enhances IBM watsonx Code Assistant for Z capabilities to support enterprise-scale modernization of complex mainframe applications.

IBM Bob Premium Package for Z introduces an agentic development experience for IBM Z, enabling teams to plan, execute, validate, and govern multi-step modernization workflows across the SDLC, directly within the development environment.

The IBM Advantage:

The native expertise IBM brings to mainframe modernization is built on decades of experience. While other AI tools can assist with code at a syntax level, they lack the architectural understanding required for true modernization.

IBM Bob Premium Package for Z embeds decades of IBM Z knowledge — understanding not just how to write code, but how applications, data, and transactions interact across the environment, and how complex processing workflows are designed and orchestrated.

Two Purpose-Built IBM Z Modes Within Bob

The IBM Bob Premium Package for Z is designed to modernize large, complex IBM Z applications through specialized modes that understand intent, anticipate impact, and accelerate workflows with collaborative automation.

Z Architect Mode

Z Architect Mode enables system-level reasoning across mainframe applications — helping teams understand application structure, dependencies, business intent and change impact before updates are made. By combining rich application metadata with multi-model intelligence, it can deliver context-aware, enterprise-wide insights that support confident planning and drive architectural decisions aligned to business value.

Z Code Mode

Z Code Mode performs complex, time-intensive development tasks by leveraging intelligent partners and automated workflows to drive fast and efficient outcomes. It generates, refactors, and transforms standards-aligned code using Z-aware context, then helps optimize, debug, and improve quality through prioritized insights and automated issue resolution, helping to reduce technical debt, risk and time to delivery.



IBM Bob

Boost Productivity

Innovate faster by offloading routine tasks to AI

Accelerate Delivery

Achieve faster time to value with goal-driven automation

Improve Quality

Identify issues early with continuous guidance

Key use cases

- **Understand Applications Across the Enterprise:** Enterprise-scale metadata spanning hundreds of programs provides end-to-end application visibility, enabling architecture-aware insights that eliminate blind spots and drive business-aware understanding.
- **Pre-Change Impact Assessment:** In-depth analysis of applications, middleware, databases, and dependencies, with visualized architecture diagrams and dependency flows — revealing how changes ripple across the system. This helps teams anticipate impact, reduce risk, and prevent costly disruptions.
- **Generate Business-Aware Explanations and Outcomes:** Enterprise-specific data dictionaries embed domain context to deliver business-aware insights, help reduce hallucinations, and accelerate team alignment with less SME dependency.
- **Execute Complex Coding Tasks:** Generate, modify, and transform code aligned to enterprise standards through an agentic chat interface, improving developer productivity.
- **Incremental Refactoring:** Auto-Refactor and modernize only selected parts of the application without a full rewrite or migration and validate each step before moving forward.
- **Transform Code to Modern Languages:** Bob Premium Package for Z doesn't just translate COBOL or PL/I to Java — it understands embedded business rules and ensures they survive transformation to microservices, containers, or cloud architectures.
- **Optimize, Debug, and Improve Code Quality:** Improve performance and maintainability through prioritized insights and automated issue resolution, lowering risk, reducing downtime, and enabling faster, higher-quality releases.

Delivering AI across the mainframe SDLC requires a different architecture. Bob is built for that.

IBM Bob is an AI development tool for enterprise developers that can plan, execute, validate, and govern multi-step modernization tasks across the software development lifecycle (SDLC). It brings together AI and agentic orchestration to actively drive complex development workflows directly within the IDE.

Built on IBM Bob, the Premium Package for Z extends this capability with deep IBM Z domain expertise, including system-level language and middleware knowledge. It embeds Z-specific context, advanced analysis capabilities, and enterprise-aware intelligence, providing the insights needed to better understand, evolve, and modernize mainframe applications with greater precision and confidence.

[Learn more about Bob](#) →



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