

Boost productivity with **Brillio's GenAI** **Developer Assistant**

Nurture robust developer experiences with our GenAI-based tools on AWS to foster innovation and drive continued business success



Why enterprises should prioritize developer experience

A positive developer experience can help attract top talent and reduce turnover, ensuring enterprises have skilled developers to drive their projects forward. Investing in AWS developer productivity tools and practices can increase ROI by enabling faster, more efficient development cycles. An optimal developer experience allows enterprises to respond quickly to market changes and customer needs, maintaining a competitive edge. Enterprises can ensure long-term growth and success by fostering a productive and innovative development environment. Providing developers with the right tools can significantly enhance their productivity. Higher developer productivity means delivering new features, updates, and products faster. Efficient developers can complete more in less time, reducing labor costs and optimizing resource utilization.

Current challenges in AWS debugging

Developers often face several challenges when debugging on AWS. One of the primary issues is the extended time required for debugging, with developers spending an average of 3–4 hours resolving AWS-related problems. This prolonged debugging time can significantly impact productivity and delay project timelines. Another challenge is the skill gaps among developers, particularly in networking, databases, and security. Limited expertise in these critical domains can hinder effective problem-solving and increase the time needed to diagnose and fix issues.

Additionally, complex organizational processes add to the difficulty of AWS debugging. Developers must adhere to stringent security guidelines, navigate intricate ticketing systems, implement best practices, and manage AWS-specific networking setups. These processes can be time-consuming and require a deep understanding of AWS infrastructure and protocols. These challenges highlight the need for improved tools and solutions to enhance developer productivity and streamline the debugging process on AWS.

GenAI on AWS for developers

GenAI on AWS offers a transformative solution to enhance developer efficiency and innovation. It guides developers through complex AWS configurations and stringent security protocols, significantly reducing the time spent on routine maintenance tasks. By automating and streamlining the identification, diagnosis, and resolution of issues, GenAI-based solutions enhance the developer experience and free up valuable resources, allowing developers to focus more on innovation and less on troubleshooting. The result is a substantial reduction in downtime and a notable boost in overall productivity. GenAI on AWS is a game-changer for developers, providing them with the tools and support needed to navigate the intricacies of cloud environments with ease and efficiency—leading to a more productive, innovative, and agile development process.

Brillio's GenAI-powered solution on AWS for developers

Solution highlights

- **Contextual relevance:** Combines information retrieval from a structured knowledge base with insights from conversation history, enabling more informed and coherent interactions. Retains user-specific preferences and past interactions, delivering tailored responses that enhance engagement and satisfaction.
- **Efficient data storage:** Utilizes DynamoDB for structured storage of conversation history, allowing for quick retrieval and management of user interactions. Continuously updates conversation history in DynamoDB, enabling the system to learn and adapt from ongoing interactions in real-time.
- **Vector search capabilities:** Leverages OpenSearch Vector DB for advanced semantic search, enabling more accurate retrieval of relevant information based on the nuances of user queries. The integration of OpenSearch enhances the speed and accuracy of information retrieval, allowing for faster conversations response times.

Our GenAI-based developer productivity solution on AWS streamlines issue resolution, empowering teams to resolve problems swiftly. The solution uses an advanced Retrieval-augmented Generation (RAG) approach that utilizes historical dialog context alongside a structured knowledge base from manuals, documents, and logs, AWS APIs, and Terraform state files to enhance the quality and relevance of generated responses. By leveraging past conversations, this method improves the relevance and coherence of generated outputs, enabling more personalized and context-aware interactions. This integration helps systems understand user intents clearly and provide accurate, contextually appropriate responses. It is beneficial in applications like customer support and virtual assistants. The solution primarily uses Amazon S3, Lambda, AWS OpenSearch, AWS Bedrock services, and DynamoDB for RAG conversations.

Benefits

- **Efficient troubleshooting:** The solution significantly reduces the time spent on debugging by allowing developers to focus on fixing issues rather than identifying them. This leads to faster problem resolution and a more streamlined development process.
- **Reduced downtime and increased productivity:** By minimizing downtime, the solution ensures the smooth operation of systems and efficient workflows. Developers can quickly address and resolve issues, boosting overall productivity.
- **Context-aware responses:** Utilizing conversation history, RAG can generate responses that are more relevant and context-aware. This leads to a more natural interaction flow and enhances the user experience.
- **Personalized user experience:** Our RAG-based solution tailors responses based on past interactions, creating a personalized experience that caters to individual user preferences and needs. This customization improves user satisfaction and engagement.
- **Enhanced quality and accuracy:** By pulling in relevant external data, the solution enhances the quality and accuracy of responses. Users receive the most up-to-date information, which improves decision-making and problem-solving.



ABOUT BRILLIO

At Brillio, our customers are at the heart of everything we do. We were founded on the philosophy that to be great at something, you need to be unreasonably focused. That's why we are relentless about delivering the technology-enabled solutions our customers need to thrive in today's digital economy. Simply put, we help our customers accelerate what matters to their business by leveraging our expertise in agile engineering to bring human-centric products to market at warp speed. Born in the digital age, we embrace the four superpowers of technology, enabling our customers to not only improve their current performance but to rethink their business in entirely new ways. Headquartered in Silicon Valley, Brillio has exceptional employees worldwide and is trusted by hundreds of Fortune 2000 organizations across the globe.



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