# New Relic and GitHub Copilot integration automates code issue resolution to boost software reliability



New Relic has unveiled an integration between its AI-driven observability platform and the GitHub Copilot coding assistant, a development aimed at enhancing software development workflows and bolstering application reliability. This integration seeks to address the traditional challenges faced during change validation and incident response, enabling companies to expedite their software deployment processes while ensuring system stability remains a priority. By marrying New Relic’s proactive monitoring capabilities with the automated coding features of GitHub Copilot, the collaboration stands poised to reshape modern development practices.

Manav Khurana, Chief Product Officer at New Relic, remarked on the transformative potential of agentic AI for developers, emphasising the increasing demands for rapid innovation without compromising quality. He stated, “With the innovative integration of New Relic's intelligent observability technology with GitHub Copilot coding agent, we are closing the loop on ensuring continued application health.” This sentiment aligns with the significant evolution in software delivery practices; as organisations navigate heightened pressure to release features faster, tools that promote reliability and efficiency become paramount.

One of the key innovations in this integration is its ability to automatically detect performance issues stemming from recent code changes. When a potential problem is identified, New Relic not only locates the root cause but also generates a comprehensive GitHub issue, replete with contextual information for developers. This issue can then be reviewed and delegated to GitHub Copilot, which analyses the problem and proposes a suitable code fix, ultimately creating a pull request for human oversight. Once the fix is incorporated, New Relic validates the adjustment, effectively completing the issue resolution cycle. This streamlined process aims to significantly reduce the time developers spend troubleshooting repetitive issues, allowing them to channel their efforts towards more strategic initiatives.

The advantages of this integration echo sentiments expressed by Julia Liuson, President of the Developer Division at Microsoft, who highlighted the critical role of collaborative integrations in enhancing the development ecosystem. She stated, “Our integrations with key partners like New Relic are instrumental in making our tools that much more scalable, reliable, and intelligent.” In a landscape where large-scale software delivery is essential, such partnerships are increasingly vital for enhancing Developers' capabilities, ensuring they can innovate with enhanced insights and automation.

Historically, New Relic's commitment to observing and improving developer productivity has been evident through its previous innovations. For instance, a case study revealed that New Relic’s Kubernetes Agents team successfully automated their software release process, reducing release times by 99% through GitHub Actions workflows, demonstrating the tangible benefits of such technological advancements. This backdrop further substantiates the effectiveness of continuous integration and deployment practices, which are integral to modern DevOps strategies.

The integration is positioned as a limited preview, specifically for users of Copilot Pro+ and Copilot Enterprise accounts, as well as GitHub’s user base. New Relic articulates that this relationship significantly deepens the incorporation of crucial observability data within the daily workflow of developers, thereby reducing the likelihood of code-related disruptions to business operations.

In summary, the combination of New Relic and GitHub Copilot not only reflects the ongoing evolution in software development but also underscores a proactive approach to application reliability. As businesses continue to navigate complexities in the digital era, this integration is anticipated to play a vital role in enhancing both the speed and integrity of software deployments, solidifying a more efficient and effective development landscape.

## Reference Map:

* Paragraph 1 – [[1]](https://itbrief.com.au/story/new-relic-github-copilot-integration-boosts-devops-speed), [[4]](https://www.businesswire.com/news/home/20241031538016/en/New-Relic-Unveils-Industry%E2%80%99s-First-Intelligent-Observability-Platform)
* Paragraph 2 – [[1]](https://itbrief.com.au/story/new-relic-github-copilot-integration-boosts-devops-speed), [[2]](https://newrelic.com/blog/how-to-relic/increase-release-velocity-with-github-workflows), [[6]](https://newrelic.com/platform/agentic-integrations)
* Paragraph 3 – [[3]](https://docs.newrelic.com/docs/agentic-ai/agentic-integration/github-copilot-integration/), [[5]](https://newrelic.com/blog/best-practices/driving-devops-productivity-with-new-relic-observability-solutions)
* Paragraph 4 – [[6]](https://newrelic.com/platform/agentic-integrations), [[7]](https://arxiv.org/abs/2406.17910)

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## Bibliography

1. <https://itbrief.com.au/story/new-relic-github-copilot-integration-boosts-devops-speed> - Please view link - unable to able to access data
2. <https://newrelic.com/blog/how-to-relic/increase-release-velocity-with-github-workflows> - This article discusses how New Relic's Kubernetes Agents team reduced release time by 99% by automating their software agent release process using GitHub Actions workflows. The automation includes tracking vulnerable dependencies, writing documentation, and syncing with partners like Amazon Elastic Kubernetes Service (Amazon EKS). Previously, updates took up to two weeks; now, the automated process takes an hour per week, enabling the team to support the latest Kubernetes versions more efficiently.
3. <https://docs.newrelic.com/docs/agentic-ai/agentic-integration/github-copilot-integration/> - This documentation provides an overview of the New Relic Agent for GitHub Copilot, an extension that offers intelligent insights and guidance to optimise application performance, monitor infrastructure, and manage deployments within GitHub Copilot. It includes installation instructions and details on interacting with the New Relic Agent through the Copilot chat interface, aiming to enhance developer productivity by integrating observability directly into the development environment.
4. <https://www.businesswire.com/news/home/20241031538016/en/New-Relic-Unveils-Industry%E2%80%99s-First-Intelligent-Observability-Platform> - New Relic unveiled the New Relic Intelligent Observability Platform, transforming observability into a key driver of business growth and developer velocity. The platform is enhanced by the New Relic AI Engine to predict and prevent issues, and streamline business and IT operations with automation. Innovations like the New Relic AI integration with GitHub Copilot aim to bridge the gap between observability best practices and tangible business outcomes.
5. <https://newrelic.com/blog/best-practices/driving-devops-productivity-with-new-relic-observability-solutions> - This blog post explores how New Relic's observability solutions can enhance DevOps productivity. It covers features like CodeStream, which integrates observability data into developers' environments, full-stack monitoring and troubleshooting, proactive anomaly detection and alerting, and real user monitoring. The article highlights how these tools help in early issue identification, faster resolution, and improved system performance, ultimately leading to more efficient software delivery.
6. <https://newrelic.com/platform/agentic-integrations> - This page outlines New Relic's Agentic Integrations, including the GitHub Copilot + New Relic AI integration. It describes how this integration automatically detects issues for DevSecOps, autonomously resolves errors in code changes to boost software reliability and release velocity, and empowers teams with intelligent recommendations and the ability to roll back to stable versions. The integration aims to enhance developer productivity and improve software quality by streamlining workflows.
7. <https://arxiv.org/abs/2406.17910> - This study evaluates the efficiency gains, areas for improvement, and emerging challenges of using GitHub Copilot, an AI-powered coding assistant, in real-world projects. The findings indicate significant reductions in developer toil, with up to 50% time saved in code documentation and autocompletion, and 30-40% in repetitive coding tasks, unit test generation, debugging, and pair programming. However, Copilot faces challenges with complex tasks, large functions, multiple files, and proprietary contexts, particularly with C/C++ code.