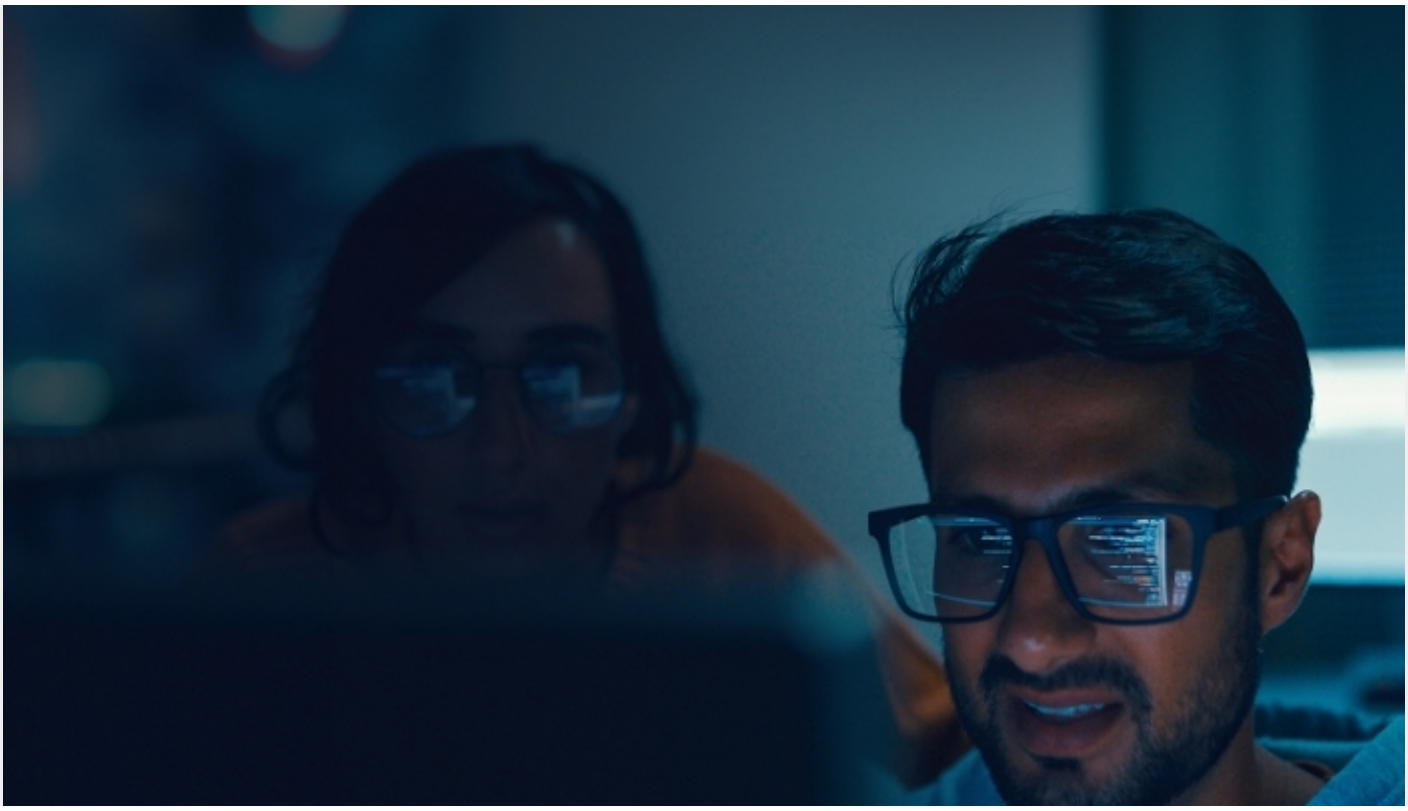
# STREAMLINING BMC AMI DATA IN CI/CD PIPELINES WITH JENKINS, AZURE DEVOPS, AND GITHUB ACTIONS



Delivering fast, reliable, and high-quality applications begins with a strong foundation in database management. Tasks such as SQL performance optimization and schema updates have traditionally been handled by database administrators (DBAs), creating bottlenecks that slow down development cycles. But what if developers could manage these tasks, resolving issues earlier and accelerating delivery?

**BMC AMI SQL Performance for Db2®** and **BMC AMI DevOps for Db2®** are purpose-built solutions that enable this shift. Developers can tackle critical database tasks by automating SQL performance testing and schema management while ensuring they meet performance and reliability standards. This approach allows teams to "shift left" by addressing potential issues early in the pipeline, promoting faster and more efficient development cycles.

## Seamless integration into CI/CD pipelines

To maximize its effectiveness, **BMC AMI SQL Performance for Db2®** and **BMC AMI DevOps for Db2®** integrate seamlessly with popular continuous integration and continuous delivery (CI/CD) tools like Jenkins, Azure DevOps, and GitHub Actions, with the addition of GitLab in January of 2025, and more to come. These integrations empower teams to embed database testing, validation, and deployment tasks directly into their development workflows for a smoother and faster process,

while also allowing developers to harness the full capabilities of BMC AMI Data, aligning database tasks with their application delivery workflows for a fully streamlined process. For example, these AMI Data solutions can be leveraged for DevOps purposes within these tools in a variety of ways, including but not limited to:

- **Jenkins**: Automates SQL performance testing and schema validation through a dedicated plugin.
- **Azure DevOps**: Employs a universal connector to include database updates within DevOps workflows.
- **GitHub Actions**: Incorporates database testing and deployment steps into GitHub-based pipelines.

# BMC AMI DevX: Supercharging database and DevOps orchestration

**BMC AMI DevX** can also act as an orchestration engine, unifying **BMC AMI Data** solutions within CI/CD platforms to automate database and DevOps tasks in a single pipeline. DevX equips developers with powerful tools, including the shift-left capable **BMC AMI SQL Performance for Db2®** and **BMC AMI DevOps for Db2®**, enabling them to take on tasks traditionally handled by DBAs, such as identifying and resolving SQL performance issues or validating and deploying schema changes. By automating these steps earlier in the process, DevX accelerates workflows, fosters seamless collaboration between developers and DBAs, saves time, boosts efficiency, and delivers high-quality outcomes.

# Real-world examples

## 1. Automating SQL performance testing:

With BMC AMI Data, a Jenkins pipeline can include automated SQL performance testing, allowing developers to identify inefficient queries early in the development cycle—without waiting for a DBA. By addressing performance issues sooner, teams can avoid costly delays and ensure their applications run smoothly in production.

## 2. Managing schema changes:

In an Azure DevOps pipeline, BMC AMI Data simplifies schema management by automatically validating and deploying updates while ensuring all dependencies are met. Developers can independently manage schema changes, reducing the need for DBA involvement and eliminating bottlenecks.

## 3. Streamlining with GitHub Actions:

Utilizing GitHub Actions, teams can embed SQL performance testing and schema validation steps into their workflows directly within their GitHub repository. By storing schema files, SQL scripts, and other database-related resources in a Git repository, GitHub Actions can automate these processes to ensure database changes are monitored, validated, and optimized alongside application updates. This integration creates a unified pipeline, saving time and minimizing risk by streamlining version control and automated checks.

## Empowering developers, simplifying collaboration

BMC AMI Data and its integrations into Jenkins, Azure DevOps, and GitHub Actions shifts database management tasks left, giving control to developers. With BMC AMI DevX as the orchestration engine, developers can collaborate with DBAs earlier, resolve issues faster, and streamline the entire database and DevOps lifecycle.

## Conclusion

BMC AMI Data redefines how database and DevOps workflows operate by automating SQL performance testing and schema management. With seamless integration into CI/CD pipelines and orchestration from BMC AMI DevX, teams can break down silos, accelerate development, and deliver more reliable applications.

Ready to revolutionize your database and DevOps processes? Explore how BMC AMI solutions can transform your workflows today.

Learn more in this e-book: Driving down database development dollars