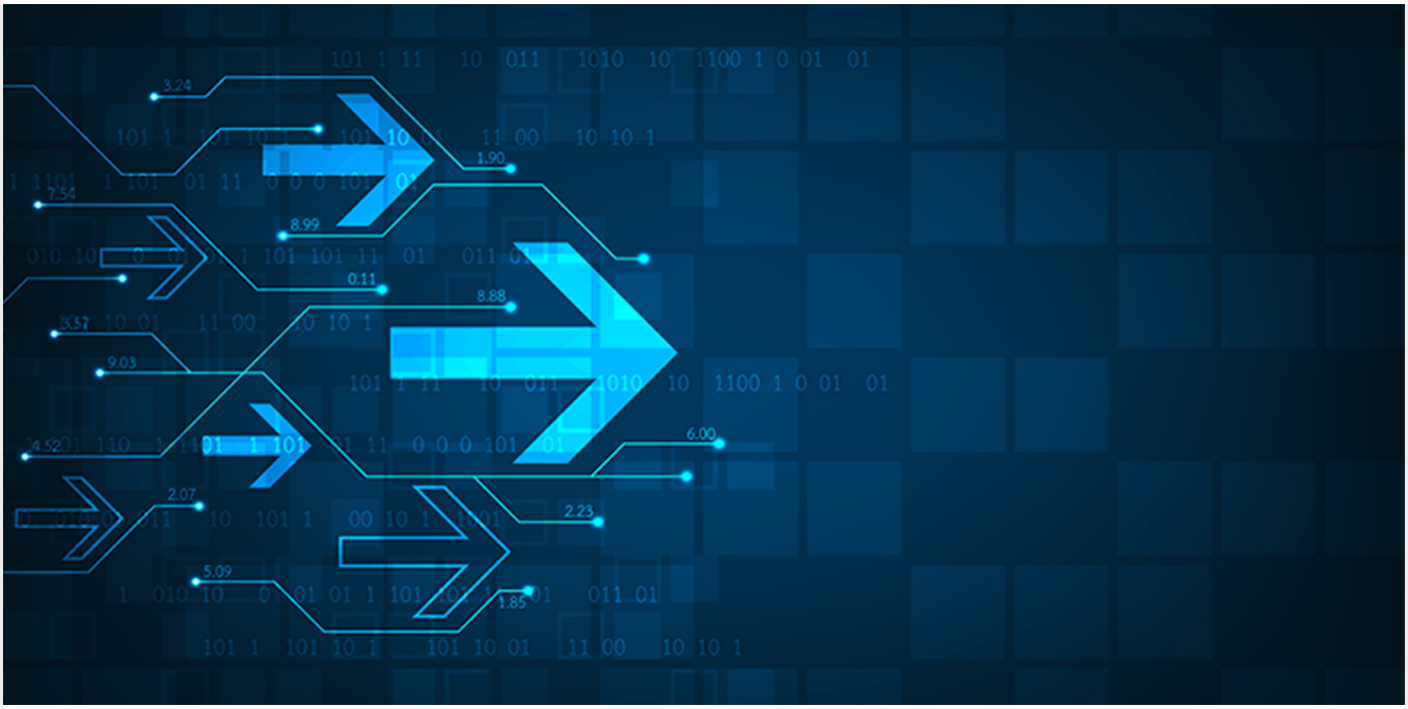
WHY IBM® IMS™ ORGANIZATIONS MUST EMBRACE DEVOPS



One of the key findings from the 19th annual *BMC Mainframe Survey*, the industry's largest research study, is that DevOps on the mainframe is now a standard approach, with 62 percent of respondents reporting its use, up 12 percentage points from the 50 percent of respondents who reported using it five years ago.

According to the survey, some of the most recognizable and measurable benefits of DevOps on the mainframe are:

- Greater stability and security
- Improved application quality, and
- Quicker application deployment

And the mainframe organizations that have successfully implemented DevOps on the mainframe are reaping the rewards, such as:

- Improved deployment frequency
- Faster time to market (TTM)
- Lower failure rates
- Shorter lead times between fixes, and
- Improved mean time to recovery (MTTR)

While improved IT infrastructure, increased automation, and higher quality of applications remain top benefits of DevOps, significantly more respondents find value in the security-level improvements it provides.

As enterprises strive hard to bring new, high-quality apps and services to the market to support digital businesses and meet evolving customer demands, they must constantly adapt and innovate their current processes and technologies.

The increased use of DevOps practices on the mainframe has helped enterprises both adapt to these demands and update mainframe applications more frequently. The 2024 *BMC Mainframe Survey* shows that the respondents not planning to adopt DevOps on the mainframe has decreased from seven percent in 2023 to only four percent in 2024.

Including IBM® IMS™ data, applications, and system management workflows in their DevOps adoption strategies can help enterprises reap the maximum benefits of DevOps adoption and create a more inclusive, complete DevOps structure.

Here are some of the ways BMC can work with IMS customers to help them embrace DevOps and implement DevOps practices in their enterprise IMS environments.

1. Leverage IMS-specific Jenkins plugins

Applications that take too many checkpoints/commits drive unnecessary expenses, cause resource wastage, and increase response time. Conversely, applications that are not taking enough checkpoints/commits may be holding locks too long and degrading performance. Finding the applications that are taking too many or too few checkpoints/commits is challenging. The **BMC AMI DevOps for Application Checkpoint Analysis Jenkins Plugin** comes to the rescue by assisting in the identification of programs that use too many or too few IMS checkpoints and/or IBM® Db2® commits. Using the plugin, you empower your application developers to see and fix application checkpoints/commit issues during the development stage itself.

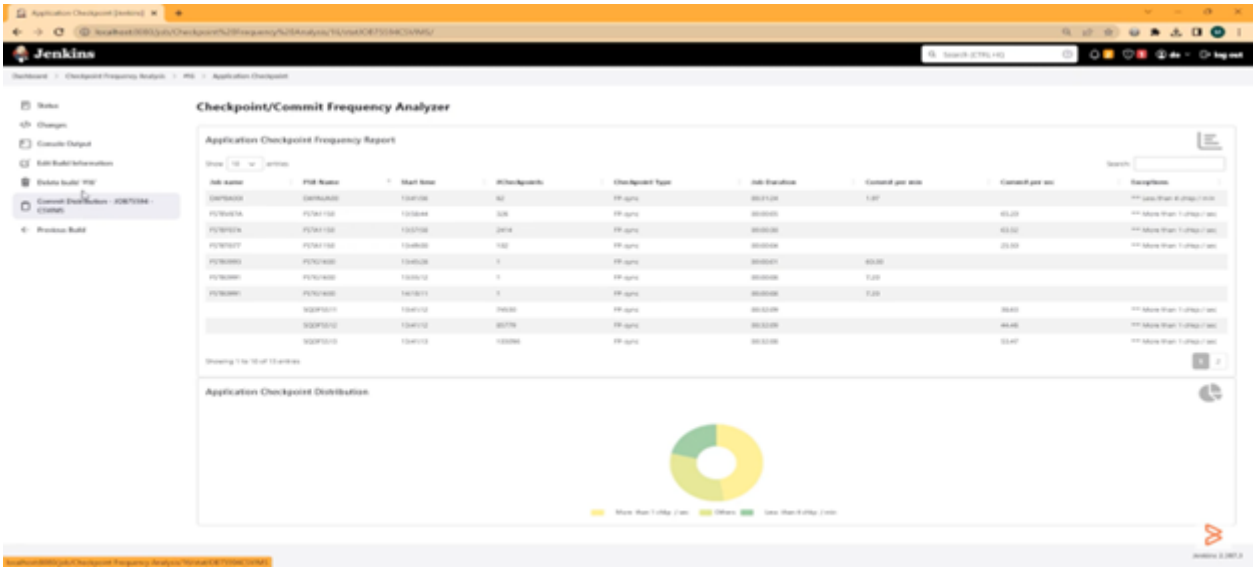


Figure 1. Checkpoint/Commit Distribution Action

Today's 24x7 availability demands that IMS customers make dynamic changes to the IMS resource definitions without the need to do IMSGENs. This involves increasing value by eliminating tedious work and automatically considering and updating all dependencies as needed.

When you harness the capabilities of the **BMC AMI DevOps for Change Manager for IMS™ Jenkins Plugin**, the Jenkins plugin helps communicate with BMC AMI Change Manager for IMS™, a part of

the BMC AMI Transaction Management for IMS™ solution, on the mainframe so you can dynamically make IMS system changes while they are online. Please refer to this solution brief to learn more.

2. Reduce the risk of making database description and program specification block (DBD/PSB) changes

In a DevOps environment, application developers and database administrators (DBAs) should be able to see the impact of proposed changes, generate the necessary change jobs, and easily undo mistakes.

These capabilities help reduce risks before change implementation, and performing impact analysis enables DBAs to understand the consequences of changes before executing them, preventing potentially costly errors in the production environment. This also helps universal DBAs to better understand how things work with IMS by identifying what changes are required, how their actions will enable those changes, and the likely outcome (before it happens).

The 2024 *BMC Mainframe Survey Report* shows that while organizations continue to see significant DevOps-driven improvements in development speed and agility, many still identify bottlenecks further down the software delivery pipeline. The focus is now shifting to infrastructure and configuration as areas of improvement, with 31 percent saying that they need database schema change capabilities to augment their DevOps journeys (up from 25 percent in 2023).

Incorporating BMC AMI Change Manager for IMS™, a part of the BMC AMI Administration for IMS™ solution, into your mainframe-Inclusive DevOps toolchain reduces the risk of incorrect changes to the IMS environment. It supports IMS developers in a DevOps environment, and seamlessly integrates with mainframe-inclusive DevOps toolchains, enabling change to work to the users' advantage. Additionally, the migration capability in BMC AMI Change Manager for IMS™ facilitates moving changes between environments, such as from development to testing.

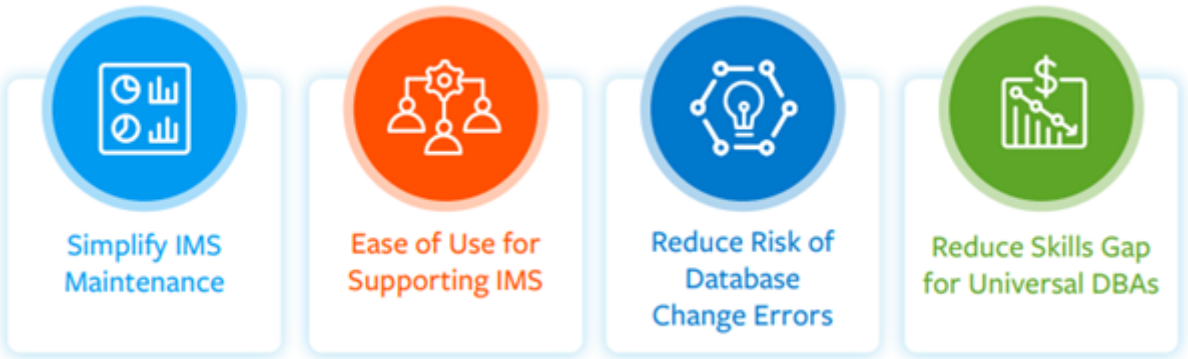


Figure 2. The top four benefits of incorporating BMC AMI Change Manager for IMS into your mainframe-inclusive DevOps toolchain.

3. Rapidly build production-grade development and/or test environments whenever needed

DevOps adoption can help shorten the software development life cycle (SDLC) while delivering features, fixes, and updates in alignment with business objectives. Software testing plays an integral part in maintaining quality at each step of the SDLC. In a DevOps environment, "quality" testing is an

automated process that enables continuous and faster delivery of software, thereby helping shorten the overall SDLC. An effective "quality" test automation strategy must always include testing with high-quality test data (production-grade as often as possible) in a production-grade, lower-level environment.

Now imagine, if you had the ability to create, at will, lower-level development and/or test environments from one or more production environment(s). You would be able to create production-grade test data that can be easily deployed to multiple development and/or test IMS systems. And each IMS system would have the same set of databases with different dataset names, with automatically generated database recovery control (DBRC) definitions and Integrated Data Cluster Access Method Services (IDCAMS) allocation members.

You could make things work in your favor by maintaining historical backups of IMS databases; or, in other words, creating an "archive." The Archive Image Copy and Recovery Utility (ARU), part of BMC AMI Change Manager for IMS™, can create one or more archive image copies by saving all the relevant information required to reproduce the same environment at the time of recovery. By using BMC Archive Image Copy technology, you can manage multiple development and/or test IMS environments effectively.

Embracing DevOps for IMS

To summarize, IMS customers must realize the true potential value of IMS in a mainframe and enterprise DevOps strategy and embrace DevOps for IMS. As discussed here, BMC provides a host of solutions that can empower the adoption of DevOps for IMS customers worldwide so that they can reap the true benefits of a more inclusive, complete enterprise DevOps structure and strategy.