Take Charge of Database Changes with BMC AMI Change Manager for IMS®

Unlock a modern graphical user interface (GUI) and guided workflows that simplify and automate IMS database change management for higher availability and lower risk.
IBM's Information Management System (IMS) was created for NASA in 1968 to catalog the Saturn V rocket’s three million parts. The vendor began licensing it for commercial use in 1970, and although the lights of the Apollo Program have long since gone dark, IMS remains a highly relevant technology to this day. According to some estimates, an astounding 95 percent of the Fortune 1000 continue to rely on IMS in industries such as finance, insurance, healthcare, and aerospace.

As data volumes continue to double approximately every two years and transaction throughput reaches unprecedented levels, the speed and reliability of IMS continue to make it the first-choice system of record for many organizations. Unfortunately, the specialized database administrators (DBAs) who keep IMS systems up and running are rapidly approaching retirement age, and it’s unclear who will replace them.

¹ https://youtu.be/DhlpnSbSuJE?t=3m13s
The Disappearing Mainframe DBA

The launch of the IBM z14 mainframe and its subsequent success heralded the “most successful Z program” in IBM’s history. Not long after z14 hit the marketplace, IBM followed it up in September 2019 with the z15, capable of processing up to 1 trillion web transactions per day. Any speculation by industry “experts” spelling IBM z’s demise before the turn of the millennium couldn’t have been further off the mark.

On the software side, IBM continues to innovate to keep the mainframe at the forefront of compliance-heavy industries with enhancements to Db2, IMS and the accompanying subsystems that power the computing requirements in banking/finance, insurance, healthcare and government. Unfortunately, a generation of computer science majors opted to forgo making “outdated” mainframes part of their education, instead drawn by the allure of languages like Java, Python, and Ruby. Enterprises that rely on the mainframe are feeling the lack-of-resource strain.

According to Forrester Research, approximately 23 percent of mainframers retired between 2013 and 2018, 63 percent of those positions remain vacant. With 37 percent of the mainframe workforce between the ages of 50 and 64 as per BMC’s 2019 Mainframe Survey, better technology and automation is going to have to trump the long wait for more experienced mainframe developers and sysprogs to enter the workforce.

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3 https://dzone.com/articles/new-forrester-consulting-kpi-study-is-a-must-read
4 https://www.bmc.com/info/mainframe-survey.html
The Cost of the Talent Gap

With mainframers disappearing, DBAs specializing in the intricacies of IMS are becoming even more of a rarity. When these individuals retire, they take valuable system knowledge accrued over years of on-the-job experience with them. As enterprises struggle to cope with common maintenance needs, it erodes their ability to focus on the future and the situation only becomes more dire.

The 2019 BMC Mainframe Survey illustrates the extent of the mainframe skills gap:

- **40%** of respondents are over the age of 50
- **29%** have fewer than five years of experience

Transaction volume, number of databases, and data volume are all steadily increasing for most organizations.

With an understaffed team of IMS DBAs, businesses are headed for catastrophe. Without the tools necessary to maintain efficient database management, personnel are forced to put in long and frustrating hours, and all the time spent putting out fires means that application performance will inevitably begin to suffer. In short, customers with plenty of options will start to look elsewhere for the service they need and expect.
The Rise of the Universal DBA

Instead of searching in vain for an adequate number of experienced IMS DBAs to keep systems up and running, organizations are going a different and more realistic route and hiring universal DBAs. Generalized or universal DBAs might bring experience working with Java, Oracle, or IBM® Db2®, and while this experience is valuable, migrating to an IMS system with an alien interface can certainly be a shock.

The same features that make IMS an attractive database, such as speed of data retrieval, also make it more complex to manage. The IMS catalog is a step in the right direction of providing capabilities the next generation of DBAs have grown accustomed to using, but adoption of the IMS catalog has lagged and using it means current IMS change procedures need to be modified. Fortunately, BMC has created a new solution that allows organizations to keep the advantages of IMS while making management easier than ever for DBAs.
For some of the largest and most successful companies in the world, the need for an IMS database is non-negotiable—and for good reason. Almost every time you swipe a credit card, book a flight, make a telephone call, or process payroll and accounts, you’re relying on IMS to retrieve and process information swiftly, accurately, and without fail.

Even as the databases that govern these operations continue to grow larger and more complex, IT departments are being asked to do more with less. The dwindling number of dedicated IMS DBAs is only exacerbating the issue by making general maintenance and upkeep more difficult and time-consuming.

Recognizing that IMS is a vital system for many organizations, BMC set out to apply its automation and intelligence expertise to a field of IMS database management that has thus far remained largely unchanged. The result is a solution that makes IMS changes faster than ever before, with a modern interface and streamlined workflows that will make it easier for DBAs of all experience levels to handle the somewhat unwieldy system.

Modernizing IMS
BMC AMI Change Manager for IMS simplifies and automates database change management to provide higher availability and performance while lowering risk considerably. The graphical user interface (GUI) makes it easy for users of any experience level to manage complex IMS environments.

Recognizing that DBAs with less experience are more likely to make mistakes, BMC AMI Change Manager for IMS also reduces the risk of incorrect changes to a mission-critical IMS environment by offering easy reversals to restore the system to its original condition. Add in online comparison and cross-reference reporting, as well as help text that explains the usage of parameters, and you have a system that empowers DBAs instead of encumbering them.
A Modern GUI for Simplified IMS Management

IMS systems are fast and dependable, but their hierarchical structure also makes changes highly complex. Because BMC AMI Change Manager for IMS offers an intuitive GUI and automated, agile processes to simplify IMS maintenance, universal DBAs can approach the unfamiliar environment with confidence. By lowering the barriers to entry for the general DBA, BMC AMI Change Manager for IMS is mitigating the mainframe skills gap and increasing IMS availability and productivity.
Easy Rollback of Unwanted Changes

Changes to a complex database sometimes come with unintended consequences, but BMC AMI Change Manager for IMS makes it easy to reverse changes and restore systems to their original working order. DBAs can also analyze the impact of changes and generate jobs to easily implement those changes that are deemed desirable. By assisting IMS DBAs, regardless of experience level, with implementation of the IMS catalog, BMC AMI Change Manager for IMS reduces risks and keeps systems functioning within the established parameters.
IMS Management for All Experience Levels

BMC AMI Change Manager for IMS helps make less experienced universal DBAs more effective at managing the environment, but it’s also designed to facilitate experienced IMS specialists with implementation of the IMS catalog. With interactive generation and execution of IMS type-2 commands, interactive IMS buffer pool tuning, and analysis and rollback options to ensure easy reversal of changes, BMC AMI Change Manager for IMS is increasing the agility of businesses that continue to depend on IMS.
Conclusion

Your IMS system isn’t going anywhere, but it’s becoming increasingly difficult to maintain it. With BMC AMI Change Manager for IMS, you can streamline database changes and simplify maintenance. Armed with automation tools and agile processes, you can explore new opportunities to serve your customers and grow.

🌐 To learn more about BMC AMI Change Manager for IMS, visit [bmc.com](http://bmc.com)
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Run and Reinvent

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