STATE OF THE MAINFRAME IN 2024

Results of the [2024 BMC Mainframe Survey](#) have been released, and they reveal that the state of the mainframe is strong, with a bright outlook, thanks to emerging technologies and continued digital transformation. The mainframe's speed, processing capacity, and security continue to make the platform a key component of the ever-changing IT landscape. Enhancements to the platform's

hardware, like the IBM® z16's Telum® processor, development of adoption of modern, intuitive tooling, and incorporation of artificial intelligence (AI) and machine learning (ML) have increased the mainframe's capabilities while also making it more accessible to IT professionals. The result is that mainframes are still in high demand as a reliable platform for new innovation.

Positive perception

This year's edition of the BMC Mainframe Survey, now in its 19th year, shows that positive perception of the mainframe remains high, with 94 percent of respondents seeing it as a long-term platform or a platform for new workloads. Not surprisingly, survey results also show that investment in the mainframe remains high, with 90 percent of respondents reporting that their organizations are continuing to invest in the platform. While large (10,001–50k MIPS) and extra-large (greater than 50k MIPS) shops show increased investment, smaller shops (under 10k MIPS) are seeking to maintain current investment levels while leveraging new technologies to optimize within their current footprint.

Top priorities: Compliance and security

Named by 64 percent of 2024 BMC Mainframe Survey respondents, compliance and security top the list of mainframe priorities for the fifth consecutive year. While the threat of ransomware remains a top concern, survey respondents report decreased confidence in the effectiveness of their ransomware controls, with an eight percent drop in those that find their controls to be extremely effective. This drop in confidence is even more pronounced in European respondents, with a 10 percent decrease.

With official application of the European Union's Digital Operational Resilience Act (DORA) coming in January 2025, and ransomware attacks continuing to make headlines, it is clear that ransomware controls, hardened security, and recovery capabilities are facing increased scrutiny.

New technologies are getting attention

Cost optimization took the second spot on the list of priorities, while the number of respondents listing artificial intelligence for IT operations (AIOps) and operational analytics as a top priority jumped to 45 percent (an 11 percent increase from 2023), moving it into the top three.

The increased prioritization of AIOps reflects surging interest in the implementation of emerging technologies on the mainframe. Those reporting the adoption of AIOps on the mainframe increased nine percent from the 2023 BMC Mainframe Survey, while 76 percent of respondents reported the use of generative AI (Gen AI) in their organizations.

The power of AI/ML and Gen AI open a new world of possibility in IT management. Organizations are leveraging these technologies throughout their IT ecosystems to gain real-time insight into security postures, automate issue resolution, gain critical business insight, and onboard and train new personnel.

Respondents are also considering the use of cloud technologies, with storage backup, connecting the mainframe to cloud-based workloads, and utilizing a cloud-based mainframe as leading considerations.

While not technically a new technology, the use of Java for mainframe code is increasing, as well. As organizations feel the need for code that is accessible across platforms, and for developers who can write mainframe code without additional training, Java has emerged as an attractive option. Survey results show an increase in new applications being written, and in the rewriting of existing applications, in the language.

Overall, the use of these technologies promises to improve performance and provide new insights into mainframe data while also making the mainframe more secure, cost-effective, and accessible to IT professionals.

Mainframe transformation continues

Results of the 2024 BMC Mainframe Survey show a strong positive perception of the platform as one of growth. While compliance and security are top priorities, respondents indicate that there is work to be done to further protect the platform from threats like ransomware. The survey also shows that new technologies play a pivotal role in mainframe transformation, with organizations considering how best to utilize these technologies to drive the platform into the future while optimizing costs.

In short, the mainframe remains strong, poised to embrace new workloads while also optimizing infrastructure, tools, and processes. The BMC AMI suite covers the breadth of the mainframe software stack, and we are committed to helping organizations simplify their mainframe environments and create new levels of flexibility for the future using cloud, AI, and Gen AI technologies. To learn more about the direction of BMC AMI innovation, read the BMC AMI Platform Statement of Direction.

Download the 2024 BMC Mainframe Survey report for more detail about the current state of the mainframe and its future, including insights into the use of DevOps, AIOps, and Gen AI on the platform.