IBM AIX operating system for IBM Power

Modernize your workloads with a secure, scalable and robust open standards-based UNIX operating system

Highlights

Leverage greater workload scalability and improved Live Update features

Develop new capabilities around mission critical workloads

Enhance disaster and recovery protection for AIX workloads in a hybrid or public cloud

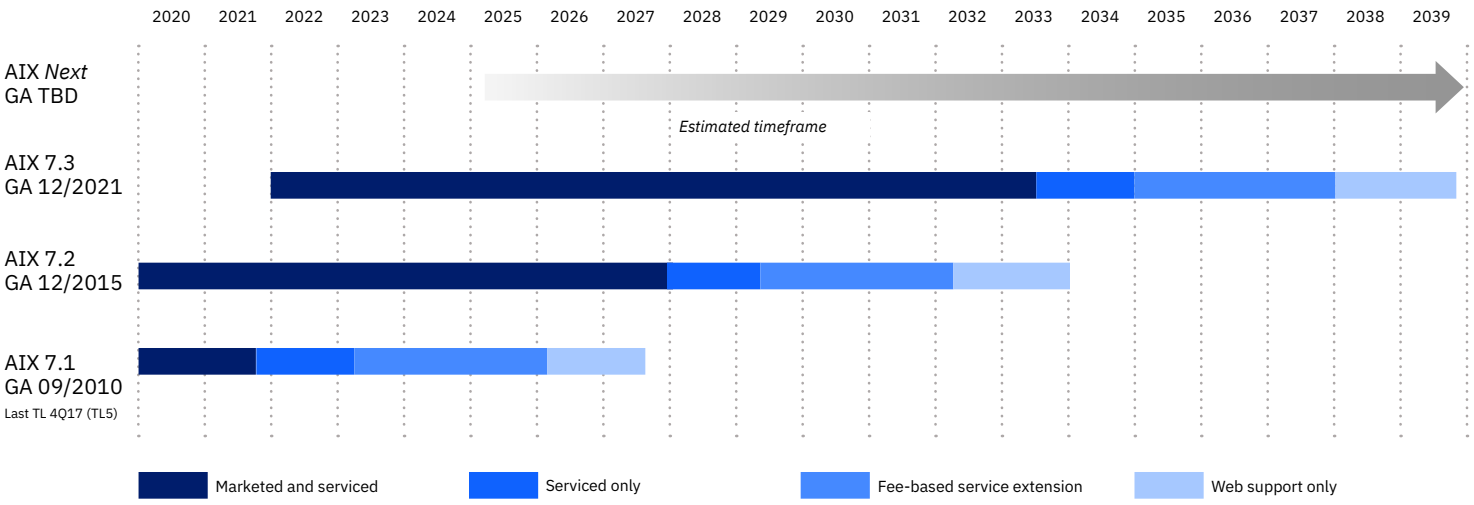
Harness AI capabilities and gain new insights

In the era of modern business, the demand for elastic computing capabilities, flexible IT infrastructure, continuous availability and security is essential. As companies navigate dynamic market conditions and transform their businesses for growth, they need an operating system they can depend on. As businesses continue on their modernization journeys, the need for a reliable foundation with the flexibility and capabilities to adapt and bridge to new technologies is made apparent.

One of the advantages of IBM® Power® Systems is the ability to run various workloads across IBM AIX®, IBM i and Linux® software simultaneously, which is key for consolidation purposes.

IBM Power provides an important bridge to a new ecosystem of traditional enterprise workloads like SAP HANA, containerized cloud-native solutions like IBM Cloud® Private or Red Hat® OpenShift®, and breakthrough AI applications — all running side by side with mission-critical applications required for core business.

AIX roadmap



All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice and represent goals and directives only

Figure 1. Support timeline
for future generations of AIX

Leverage greater workload scalability and improved Live Update features
AIX is the foundation for many core business applications and database environments. The IBM AIX operating system is a cornerstone of mission-critical computing that evolves to continually introduce a wealth of new hybrid multicloud and open source capabilities. AIX customers can now leverage greater workload scalability, better cloud automation with Ansible®, enhanced security, flexible licensing models, and more than 300 open source packages. IBM Power Systems remains committed to delivering an AIX release roadmap of further improvements in terms of its core capabilities around performance, scale and resiliency, but also innovation and modernization.

AIX 7.3 is the most current AIX release and builds atop a strong history by providing new functions and capabilities that further improve performance, scale, availability and security, all while maintaining application binary compatibility to protect existing IT investments. AIX 7.3, coupled with IBM Power10® processor-based Power Systems, delivers an optimized and resilient computing platform designed to adapt to changing business demands.

AIX 7.3 is binary compatible with previous versions of the AIX operating system, including AIX 6 and AIX 5L. Applications that ran on earlier versions of AIX will continue to run on AIX 7.3 — ensuring clients' prior investments are protected.

AIX has some unique features, such as the AIX Live Kernel Update, which was introduced with AIX 7.2 (TL0) to allow for the general application and activation of any interim fix without a required reboot. AIX 7.2 (TL1) added support for live updates of the AIX kernel with service packs and new TLs, again without requiring a reboot in order to activate the changes.

AIX support for Power processor compatibility modes

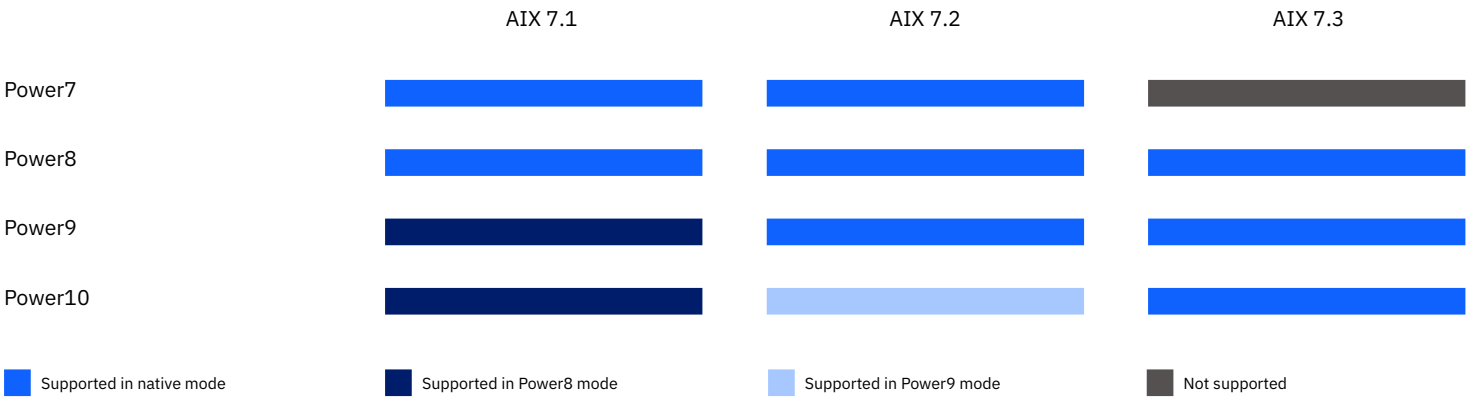


Figure 2. Overview of available AIX support for Power processor compatibility

Enhancements continue with the AIX Live Update, which supports new use cases so that clients can broadly apply and use them. This includes enhancements to support live updates in PowerVC-managed landscapes and to automate the use of Power Enterprise Pool systems for CPU and memory resource management. When the frame the LPAR is on does not have enough free resources for Live Update, clients can leverage Live Partition Mobility (LPM) in a PowerVC environment to perform the update, or allow the system to reduce CPU resources to complete the operation.

Develop new capabilities around mission critical workloads

The AIX Toolbox for Open Source Software contains a collection of open source software built for IBM Power Systems. This software provides the basis of the development environment of choice for many application developers, allowing clients to run their AIX and Power environments similarly to how they manage their other platforms. All the tools are packaged using the easy to install RPM format. The software provides common open source middleware and languages that help clients develop capabilities around their mission critical applications.

AIX is helping over 5,000 clients transform their IT infrastructure into a private, on-premises cloud with PowerVC. PowerVC provides hybrid cloud functionality, allowing for the ability to easily import and export AIX VMs between clouds, as well as software-defined infrastructure capabilities that allow you to spin up SAN-less clouds for DevOps environments.

AIX is now available on Power10 Systems in the IBM Cloud through the IBM Power Systems Virtual Server. Customers have always counted on AIX to support mission-critical databases. Now they can also take advantage of greater workload scalability, better cloud automation, enhanced security and flexible licensing models. They can also run AIX workloads in hybrid or public cloud environments without having to re-factor or re-write them.

Enhance disaster and recovery protection for AIX workloads in a hybrid or public cloud

Data center recovery and service availability are some of the most important topics for IT infrastructure. Natural disasters not only affect normal operations, but human errors and terrorist acts can also affect business continuity. Even with fully redundant infrastructure, services are vulnerable to disasters. Equipment may be damaged depending on the extent of the disaster and therefore not suitable for restoring data. Since backup restores can take too long to meet business requirements, the replication of data between sites is a good practice for minimizing business disruption. High availability software is intended to minimize downtime of services by automating recovery actions when failures are detected on the various elements of the infrastructure.

IBM PowerHA® for AIX is the premier high availability and disaster recovery solution. After years of continuous enhancements, it is the solution of choice for mission-critical operations in which all outage types, both planned and unplanned, are covered. PowerHA minimizes planned and unplanned outage events, simplifies HA administration, provides multi-site solutions and minimizes operating expenses. Power HA and VM Recovery Manager provide solutions to address client concerns around the high availability and disaster recovery of AIX.

Harness AI capabilities and gain new insights with AIX

AIX workloads are a natural source for AI. These systems host a tremendous amount of high-quality data on customer behavior and transactional information that can be further leveraged for AI development. When clients combine historical data with emerging technologies like machine and deep learning, all on the same platform, while using all sources and trained systems appropriately, they gain new insights.

Conclusion

For more than thirty years, organizations have trusted AIX to run their most important applications. As technology continues to evolve, AIX will continue to help businesses build and deploy modern applications in a secure and resilient environment while driving innovation with its hybrid cloud and open source capabilities.

Enterprises need infrastructure that is secure, highly available and adaptable to meet changing business demands. AIX delivers these capabilities and more with the performance, reliability and security your mission-critical data requires.

For more information

To learn more about IBM AIX, please contact your IBM representative or IBM Business Partner®, or visit ibm.com/it-infrastructure/power/os/aix

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