

# IBM Enterprise Application Runtimes

Modernize, Build, and Deploy with Speed and  
Flexibility



## Highlights

Java 17 ready for traditional  
WebSphere with unified  
management for minimized  
risk and disruption

License and deployment  
flexibility to reduce cost of  
compute resources

Application modernization  
tooling for a detailed roadmap  
to modernization

Runtime flexibility to optimize  
performance and improve  
agility

Java 8 reaching end of support marks a critical inflection point for organizations, pushing them to address technical debt and the risks of running outdated software. This leads to security vulnerabilities, compliance issues, and lack of vendor support that puts mission-critical Java 8 applications at risk. However, modernization consumes excessive time and resources: refactoring applications, updating dependencies, and ensuring compatibility can require thousands of developer hours. Delaying action means facing rising costs, reduced agility, and difficulty scaling in our increasingly competitive digital economy. The time to be proactive, rather than reactive, is now.

IBM Enterprise Application Runtimes (EAR) is an enterprise-ready solution designed to give organizations a competitive edge in the ever-growing landscape of application development and deployment. Explore the key features of IBM EAR and understand how this new offering can transform the way your teams build and deploy applications with minimal disruptions.

Technical debt requires **\$1.52 T** to fix and costs **\$2.41 T/year** in security, operational, and project failures<sup>1</sup>.

## Eliminate technical debt and pave the way to modernization with security, scalability, and operational consistency.

Technical debt weighs heavily on organizations and their teams, causing inefficiencies that hinder innovation and slow down progress. As legacy systems accumulate, businesses face outdated code, security vulnerabilities, and compliance challenges that threaten smooth operations. Turn towards a secure and scalable environment designed to support diverse architectures and empower your teams to focus on what truly matters—driving innovation and responding swiftly to market demands—while also laying the foundation for sustainable growth and operational excellence.

### **IBM Modernized Runtime Extension for Java (MoRE)**

IBM Enterprise Application Runtimes introduces IBM MoRE to the portfolio, allowing businesses to leverage their existing investments in the IBM WebSphere Network Deployment (WAS ND) administrative console by enabling Java 8 and Java 17 deployments to be managed under a single operational model. This allows WAS ND clients to leverage the features and capabilities of newer Java workloads without incurring the heavy operational costs associated with migrating to alternative options. Fuel developer efficiency and propel innovation through providing unified management of both Java 8 and Java 17 applications, paving a path forward to new technologies.

### **IBM Application Modernization Accelerator (AMA)**

Accelerate modernization to any supported destination by streamlining the planning and execution of application migrations and reducing modernization effort by 75%<sup>2</sup>. It provides a detailed view of migration items, estimates, and dependencies, allowing for a customized migration plan based on factors such as complexity, cost, and available guidance data.

IBM AMA also optimizes the analysis of Java runtime migration processes to reduce the time and effort required to complete the migration while minimizing the need for customizing Java runtime configurations for new environments. Reduce risk and focus on an efficient and cost-effective transition.

#### – **Discover Relationships**

- Gain insights into your current application ecosystem through on-premise discovery tools and discover non-IBM database and integration dependencies
- Visualize the ecosystem of applications, databases, queues, and the connections between them

#### – **Accelerate data collection**

- Understand the discovered relationships and effort required for modernization to determine which ideal modernization strategy to employ

#### – **Customize your plan**

- Reduce migration effort with automatically generated, tailored configuration and intelligent guidance for your application, its databases and queues.

## Flexibility at your fingertips

### Choose the right runtime for any project or use case

As organizations face constant pressure to innovate and respond to changing customer demands, runtime flexibility becomes a crucial advantage. IBM Enterprise Application Runtimes brings the power of choice in choosing from an array of IBM and Red Hat runtimes, preventing teams from being locked into a single runtime. Empower your developers with the freedom to select the most appropriate runtime for each use case and foster a culture of innovation and agility, built to pivot and respond quickly to shifting market demands.

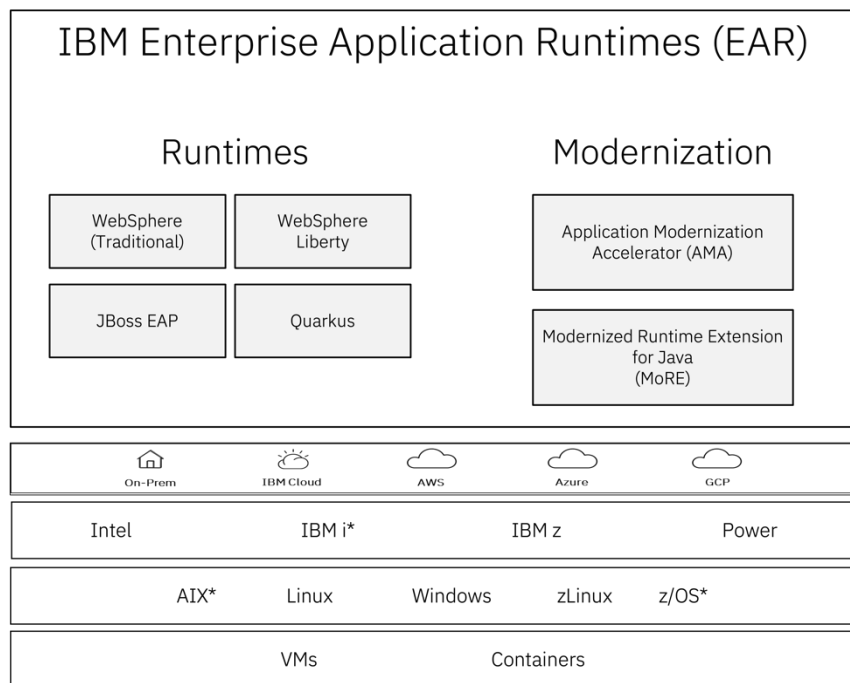
As a subscription bundle model, IBM Enterprise Application Runtimes allows businesses to dynamically scale their consumption as infrastructure and needs grows over time—supporting flexible growth in adopting new features, optimizing costs, or integrating with emerging technologies.

Runtime and deployment flexibility also proves to be cost-effective for organizations as they can scale resources up or down based on demand. This reduces resource waste by ensuring that businesses are only investing in what they need.

Leverage IBM and Red Hat runtimes to improve long-term scalability, security, and agility:

Runtimes	Benefits
IBM WebSphere Liberty	A lightweight open framework for building fast and efficient Java applications, from monoliths to microservices.
Red Hat build of Quarkus	A Kubernetes Native Java stack tailored for ultra-fast startup time, minimal resource usage, and seamless integration with popular Java libraries
IBM WebSphere Application Server	A flexible, security-rich, highly reliable and scalable Java server runtime environment for enterprise applications.
JBoss Enterprise Application Platform	JBoss EAP delivers enterprise-grade security, performance, and scalability to Java Enterprise applications.

Optimize resource allocation, tailor solutions to specific use cases, and accelerate development cycles with runtime flexibility—all so you can adopt swiftly to evolving market demands, reduce time-to-market for new applications, and maintain a competitive edge.



#### IBM WebSphere Liberty

A fast, modular, cloud-native Java runtime that simplifies the development and deployment of applications with zero-migration architecture that removes version-to-version migration challenges, auto-tuning for optimal performance without costly tuning cycles, and a regular release cadence enabling continuous delivery.

#### Red Hat build of Quarkus

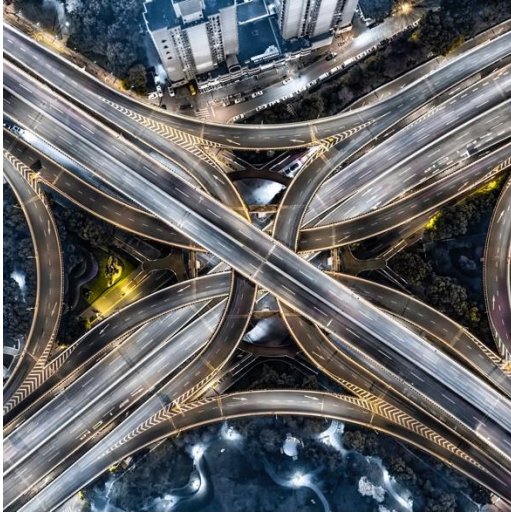
Kubernetes-native Java framework designed for building lightweight, cloud-native applications with seamless integration with popular libraries and frameworks. Streamline the development process and leverage the ability to boost developer productivity by automating repetitive tasks with a low learning curve for Java developers.

#### IBM WebSphere Application Server (WAS)

A robust and flexible platform for building and deploying enterprise applications, ensuring high availability and reliability. IBM WAS contributes to improved application responsiveness and efficient resource utilization, making it ideal for mission-critical systems.

#### JBoss Enterprise Application Platform

Use the full power of Jakarta EE to build modern applications, optimized for cloud and containers, on-premise or in virtual, private, public, and hybrid clouds. Leverage robust support for microservices architecture and integration with various cloud environments to streamline development processes and accelerate time-to-market for new applications.



## Cut technical debt, fuel the future.

Addressing technical debt is integral for organizations striving to maintain a competitive edge. Ignoring technical debt can lead to increased costs, longer development times, and decreased productivity—ultimately hindering innovation in our dynamic world where the leaders are consistently adapting to new technologies. It's time to be proactive and manage this debt to not only streamline operations but also accelerate time-to-market, enhance system reliability, and reduce operational costs.

Eliminating technical debt requires a strategic approach that minimizes risk and operational disruption while maximizing long-term agility and scalability. IBM Enterprise Application Runtimes leverages IBM Modernized Runtime Extension for Java and IBM Application Modernization Accelerator to develop a future-proof foundation for your application infrastructure. Streamline the migration progress, accelerate deployment, and focus on innovation rather than maintenance. In a market where agility and efficiency define success, leveraging IBM Enterprise Application Runtimes helps you turn away from technical debt and drive continuous innovation.

**For more information**

To learn more about IBM Enterprise Application Runtimes, contact your IBM representative or IBM Business Partner.

1. CISQ 2022 Study: [The cost of poor-quality software in the US](#)
2. Based on IBM Consulting modernization engagement analysis

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