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Oracle Releases Java 26

New release delivers 10 JDK Enhancement Proposals that strengthen Java's AI and cryptography capabilities, simplify the language, and boost developer productivity

JavaFX and Helidon commercial support now available in the new Oracle Java Verified Portfolio, a comprehensive collection of JDK-related tools, frameworks, libraries, and services

AUSTIN, Texas – March 17, 2026 – Oracle today announced the availability of [Java 26](#), the latest version of the world's number one programming language and development platform. Java 26 ([Oracle JDK 26](#)) delivers thousands of improvements that boost developer productivity, simplify the language, and help developers integrate AI and cryptography functionality into their applications. To help developers further streamline and enhance their development initiatives, Oracle is also announcing the new Java Verified Portfolio (JVP), which provides developers with a curated set of Oracle-supported tools, frameworks, libraries, and services, including commercial support for [JavaFX](#), a Java-based UI framework, and [Helidon](#), a Java framework for microservices. In addition, Oracle intends to align Helidon's release cadence with Java releases and propose Helidon as an OpenJDK project. Find out more about the Java 26 release at the [JavaOne 2026](#) conference in Redwood Shores, CA from March 17-19, 2026.

“For more than 30 years, organizations have relied on the Java platform and language to help power their mission-critical systems and support the rapid development of applications and services,” said Arnal Dayaratna, research vice president, software development, IDC. “The platform's continuous evolution enables organizations to incorporate transformative capabilities into their applications, while preserving the reliability and security that define mission-critical software. By extending Java's functionality with new features and services such as advanced AI and security capabilities, Java 26 offers organizations a faster path to innovation.”

“Java has played an integral role as a foundational enterprise technology for more than 30 years, serving as the backbone of organizations' application stacks and helping them build powerful, reliable, and secure applications and services,” said Georges Saab, senior vice president, Oracle Java Platform and chair, OpenJDK governing board. “The new features in Java 26 reflect Oracle's commitment to helping customers harness AI and cryptography to build applications that accelerate business growth. With the introduction of JVP, developers can streamline their development projects using a trusted collection of Oracle-supported tools, including Helidon, which is a fast, lightweight Java framework for building high performance microservices and AI-enabled applications.”

Key JDK Enhancement Proposals (JEPs)

Language Features

[JEP 530](#): Primitive Types in Patterns, instanceof, and switch (Fourth Preview): Helps developers increase productivity and streamline the development of applications that integrate AI inferencing by making Java more uniform and expressive. It eliminates multiple restrictions pertaining to primitive types that impose friction when using pattern matching, instanceof, and switch. To help developers further improve productivity, it also enhances the definition of unconditional exactness and applies tighter dominance checks in switch constructs, enabling the compiler to identify and reduce a wider range of coding errors.

Performance Updates

[JEP 522](#): G1 GC: Improve Throughput by Reducing Synchronization: Helps developers process more work in less time by improving memory efficiency. It reduces the synchronization between application and garbage collector threads, increasing throughput with the G1 garbage collector. By running faster and supporting more users without additional hardware, Java improves efficiency, lowers infrastructure costs, and delivers a smoother user experience.

Project Leyden Features

[JEP 516](#): Ahead-of-Time Object Caching with Any GC: Boosts developer productivity and resource efficiency by accelerating the start-up time for Java applications with any garbage collector (GC). It allows sequential loading of cached pre-initialized Java objects into memory from a neutral, GC-agnostic format. It also enhances the ahead-of-time cache, enabling the HotSpot Java Virtual Machine to improve start-up and warm-up time and be used with any GC, including the low-latency ZGC. This helps developers reduce application start up delays, scale their applications faster, and deliver better user experiences.

Libraries

[JEP 500](#): Prepare to Make Final Mean Final: Helps developers improve application security and reliability by preventing unintended modifications, tampering, or accidental errors in critical business systems. It issues warnings about uses of deep reflection to mutate final fields and allows developers to mutate final fields where essential to avoid both current warnings and future restrictions. This crucial change enforces Java's "integrity by default" principle, which is focused on protecting sensitive data and business logic, reducing hidden risks, and lowering the chance of bugs or security vulnerabilities.

[JEP 517](#): HTTP/3 for the HTTP Client API: Helps developers increase productivity by making it easier to write code that interacts with HTTP servers. It updates the HTTP Client API to support the HTTP/3 protocol, enabling libraries and applications to interact with HTTP/3 servers with minimal code change. By eliminating these common bottlenecks and enabling quicker data retrieval with reduced latency, it helps microservices and API-driven Java applications gain higher performance and more reliable network connections.

JEP 526: Lazy Constants (Second Preview): Helps developers increase productivity and resource efficiency by offering greater flexibility in the timing of their initialization, which is particularly valuable for AI and data-driven applications. Via a new API for lazy constants, which are objects that hold unmodifiable data, the JVM treats lazy constants as true constants to enable the same performance as declaring a field final. In addition, by enabling Java applications and their cloud native and AI-powered services to launch faster and use computing resources more efficiently, it helps developers execute agile and scalable deployments that lead to cost savings and a better experience for end users.

JEP 525: Structured Concurrency (Sixth Preview): Helps developers improve the maintainability, reliability, and observability of multithreaded code, which is especially beneficial for improving the scalability and resilience of AI and cloud native workloads. It simplifies concurrent programming via an API for structured concurrency, which treats groups of related tasks running in different threads as a single unit of work and helps reduce common risks arising from cancellation and shutdown, such as thread leaks and cancellation delays.

JEP 529: Vector API (11th Incubator): Helps developers improve the performance and cost efficiency of their Java applications by enabling them to deliver more insights and value with less hardware. The vector API expresses vector computations that reliably compile at runtime to optimal vector instructions on supported CPU architectures, which results in faster processing for data analytics, AI inference, and scientific computing workloads. This gives developers the ability to achieve performance superior to equivalent scalar computations often used in AI inference and compute scenarios.

Security Libraries

JEP 524: PEM Encodings of Cryptographic Objects (Second Preview): Helps developers improve productivity and enhance Java application security across widely used security formats via a new encoding API. The API encodes objects that represent cryptographic keys, certificates, and certificate revocation lists into the widely used, privacy-enhanced mail transport format, and decodes it back into objects. This reduces the risk of errors, simplifies compliance, and enhances the portability and interoperability of secure Java applications by streamlining cryptography setup and integration for enterprise, cloud, and regulatory needs.

Clean-Up Features

JEP 504: Remove the Applet API: Helps developers reduce their installation and source code footprints and improve the performance, stability, and security of applications by removing the Applet API, which was deprecated for removal in JDK 17 and is no longer part of the platform.

Additional Security, Reliability, and Performance Enhancements

In addition to the 10 JEPs, Java 26 offers dozens of updates that help organizations enhance application security, reliability, and performance. With Java 26, organizations can now streamline secure encryption with industry-standard hybrid public key encryption (HPKE),



future-proof their supply chains with post-quantum ready JAR signing, and benefit from improved support for global standards with updates to Unicode 17.0 and CLDR v48. In addition, enhanced controls for cryptographic algorithms and legacy keystores further strengthen security and compliance, which helps organizations modernize with confidence.

Application performance and reliability are improved through dozens of additional updates that lead to faster JVM startup, more efficient garbage collection, expanded C2 JIT compilation, and smarter heap management. In addition, developers and administrators can increase productivity with new features including region-based file uploads in HttpClient, stricter runtime image building, an improved JVM metrics API, and a new dark mode for JavaDoc.

The features in the Java 26 release are a result of continuous collaboration between Oracle and members of the global Java developer community via OpenJDK and the Java Community Process (JCP). For more details on the features in Java 26, please read the [Java 26 technical blog post](#).

Reintroduction of JavaFX Commercial Support to Meet Industry Demand

Oracle is reintroducing commercial support for JavaFX to meet the growing demand from customers, academia, and the software development industry for sophisticated and interactive visualizations that power AI-driven applications and analytics experiences. Commercial support for JavaFX will now be available for all new Java versions and all Java versions that Oracle provides long-term support during its five-year Premier Support period.

Support for JavaFX on JDK 8 is being extended through March 2028, and JavaFX commercial support will be made available as part of the new Oracle Java Verified Portfolio. Upcoming JavaFX release plans include JavaFX 25 and 26 for JDK 26 (available today), with updates for JavaFX 21, 17, and 8 planned for later this year. JavaFX will be made available under the same license terms as the corresponding Oracle JDK (NFTC or OTN). In addition, Oracle continues to lead the OpenJFX project, further demonstrating commitment to JavaFX in the enterprise and academic communities.

New Oracle Java Verified Portfolio Provides Curated Set of Enterprise-Grade Tools

The new Oracle Java Verified Portfolio (JVP) introduces a trusted and dependable solution that provides license and support for customers' broader Java application and development stacks. Oracle customers and Java developers depend on a wide range of JDK-related tools, frameworks, libraries, and services that do not belong in the Oracle JDK itself, with distinct versioning, support timelines, and SLAs for each. JVP provides a curated, enterprise-grade set of components that are fully supported and governed by Oracle, with clear roadmap transparency and lifecycle management.

JVP streamlines support, access, and documentation for mission-critical Java components, simplifies lifecycle management, and future-proofs customer investments. To support enterprise innovation and security standards, [Oracle includes support for JVP](#) for free for Java



SE subscribers and Oracle Cloud Infrastructure (OCI) customers running Java workloads on OCI. In addition, access and use of many portfolio components remain free for a wide range of use cases and users who aren't Java SE subscribers or OCI customers. By sourcing these validated assets directly from Oracle, customers significantly reduce their software supply chain risk as the JVP offers a trusted and verified source for essential Java ecosystem components. This helps organizations accelerate adoption and integration with the knowledge that every component is subject to Oracle's rigorous quality, security, and support standards.

In addition to JavaFX commercial support, JVP includes Oracle support for both Helidon and Oracle's Java Platform Extension for Visual Studio Code.

Helidon is an open source, cloud native Java framework designed for building and running fast, lightweight, and highly scalable microservices using Java Virtual Threads. Designed, led, and used by Oracle, Helidon integrates with enterprise and cloud native ecosystems to offer developers simplicity, productivity, choice of programming style, and built-in observability. Helidon AI extends Helidon, enabling Java developers to build high performance AI applications in Java. Helidon also includes integration with LangChain4j, Helidon MCP and facilitates building AI Agents as microservices.

By including Helidon in JVP, Oracle expands trusted, enterprise-grade support to customers and developers, enabling them to build scalable and resilient applications powered by the latest Java innovations. The Helidon release cadence is also planned to be aligned to the JDK roadmap, providing immediate support for the latest Java releases. This close alignment with the Oracle JDK and Java SE platform ensures seamless compatibility and accelerates innovation across the Java developer ecosystem. To reinforce Oracle's commitment to delivering trusted, enterprise-backed developer solutions while supporting innovation in the Java community, Helidon and the Java Platform Extension for VS Code will also remain open source.

Supporting the Global Java Community with Innovation in the Cloud

Java delivers increased innovation, performance, efficiency, and cost savings when deployed on OCI, which is the first cloud provider to support Oracle JDK 26. By delivering Oracle Java SE and advanced features such as the Java Management Service at no additional charge on OCI, Java 26 helps developers create and deploy applications that run faster, better, and with optimized cost-performance.

The Oracle Java SE Universal Subscription provides customers with best-in-class support. It now includes JVP in addition to the Java SE Subscription Enterprise Performance Pack, Java Management Service, triage support for the entire Java portfolio, and the flexibility to upgrade at the pace of customers' businesses. This helps IT teams manage complexity, mitigate security risks, and contain costs.

To learn more about Java and its global ecosystem, please visit:

- [Dev.java](https://dev.java): The official destination for Java developers



- [Ops.java](#): The new hub for Java administrators and operations
- [Inside.java](#): News and views from the members of the Java Team at Oracle
- [Java YouTube](#): The official Java YouTube channel for Java learning videos

Additional Resources

- [Download Oracle JDK 26](#)
- Read the [Java 26 technical blog post](#)
- Learn more about [JavaOne 2026](#) and [sign up for updates](#)
- Learn more about [Java Verified Portfolio](#)
- Learn more about the [Oracle Java SE Universal Subscription](#)
- Learn more about the [Java Management Service](#)

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