



# Oracle Java SE Universal Subscription: Protect Your Investment in Java SE

Software platform maintenance and patching is one of the greatest challenges of managing business-critical applications. Oracle Java SE Universal Subscription combines licenses and support into a simple subscription that allows you to cost-effectively manage Java SE installations, updates, and upgrades across your enterprise.

As the main contributor and steward of Java SE, Oracle is the only company that can guarantee long-term support and updates on a timely and predictable schedule. The Java SE Universal Subscription from Oracle provides access to tools for consistently managing updates, enabling enterprises to monitor their own Java runtimes, boosting the performance of Java 8, and includes access to a specialized Java SE support team.

## PROTECTING YOUR INVESTMENT IN JAVA SE

Java is the most widely used professional development language and the #1 developer choice for the cloud. To respond to the rapidly changing needs of developers, Oracle and the Java community introduced a six-month Feature release cadence for Java SE, increasing the pace at which innovation is delivered to developers. It is now easier to keep up with Java's innovation and move to newer releases, as each six-month Feature release contains fewer updates compared with the large number of enhancements delivered every two to three years in the Major Releases of the past. For enterprises, this affords greater predictability and consistency, allowing simple update and upgrade scheduling.

Java developers no longer need to wait years between releases for eagerly awaited features; they can take advantage of new functionality every six months by upgrading to the latest JDK release. To simplify licensing, Oracle offers Oracle JDK updates for the most recent and most recent Long Term Support version of the JDK under the Oracle No-Fee Terms and Conditions (NFTC) license, and OpenJDK builds of the most recent JDK version under the GNU General Public License (GPL), the same license used for many Linux distributions. This makes Oracle's JDK builds the obvious choice for enterprises, developers, and library maintainers. To simplify how organizations license Java SE, obtain long-term support, and



Enterprises prefer maximum flexibility with Java version selection. In a recent survey, 56% of respondents preferred staying with the version of Java used when their applications went into production and upgrading to new feature versions of Java based on business schedules, not development schedules. Java SE Universal Subscription makes this possible by providing flexibility over fixed update schedules.<sup>1</sup>

**Enterprises are increasingly focused on comprehensive software support and mission critical software patching.**

**Most large organizations have dozens of distinct Java versions installed.**

secure access to updates of older JDK versions, Oracle offers the Java SE Universal Subscription.

Updates for JDK 11 and 8 are available under the Oracle Technology Network License Agreement for Java SE (Java SE OTN License), which allows, at no cost, use for personal use, development use, and use by Oracle products. Other uses require a Java SE Subscription. Updates under the Oracle No-Fee-Terms and Conditions License for JDK 17 will be available until September 2024, and updates for JDK 21 will be available until one year after JDK 25 LTS releases (scheduled for September 2025). With a Java SE Universal Subscription, you will have access to tools, features, and updates that help you manage your cloud, server, and desktop deployments. These enterprise management capabilities help you optimize the performance, stability, and security of your Java SE investments. Java SE Universal Subscription lets you upgrade and update your applications on your schedule.

## IMPROVING JAVA MANAGEMENT ACROSS THE ENTERPRISE

An enterprise-wide review often reveals business-critical applications that run on Java SE. The average organization has dozens of distinct versions of the Java platform installed across desktops, servers, and cloud. Keeping out-of-date versions of Java in your environments may present a security risk. Customers should install all updates to get the latest performance and security improvements.

- Java Management Service (JMS) is an Oracle Cloud Infrastructure (OCI) service that can monitor Java deployments running in the cloud and on customers' locations. It allows you to observe and manage the use of Java in your enterprise. This includes reporting CVEs associated with 3<sup>rd</sup> party libraries. JMS helps you with insights and application lifecycle management features across your entire Java portfolio, including third-party clouds. Please see the "Getting Started with Java Management Service" guide for more information.
- Java SE Subscription Enterprise Performance Pack (EPP) delivers the performance of the JDK 17 Java Virtual Machine (JVM) to Java SE 8 server workloads.
- Java Flight Recorder and Java Mission Control provide in-production diagnostics with minimal performance overhead, which results in better uptime.

## SUPPORT

More than 430,000 customers choose Oracle and rely on Oracle Support to protect their technology investment. Support for cloud workloads, servers, and desktops is an integral part of the Java SE Universal Subscription. Customers get Oracle Premier Support with the purchase of a Java SE Universal Subscription, which includes 24/7 access to an experienced multi-lingual Oracle Java support team. Oracle Premier Support on Oracle Java SE products <https://www.oracle.com/support/premier/> is described further in the [Oracle Lifetime Support Policy \[www.oracle.com/support/lifetime-support/\]\(https://www.oracle.com/support/lifetime-support/\)](https://www.oracle.com/support/lifetime-support/). These pages, together with support roadmap information [www.oracle.com/java/technologies/java-se-support-roadmap.html](https://www.oracle.com/java/technologies/java-se-support-roadmap.html), provide a comprehensive view of the extent of Oracle's unparalleled Java SE Universal Subscription support coverage.

In addition to Oracle Premier support for your Oracle Java SE binaries, Java SE Universal customers also receive triage support for their entire Java portfolio, including third-party libraries and runtimes. With direct access to the leading Java SE support resources, you can:

- Log and resolve Java issues quickly and efficiently.
- Reduce time to resolution and minimize Java support costs.
- Maximize Java application uptime.

The average hourly cost of a critical application failure is in the hundreds of thousands of dollars. Furthermore, brand, reputation, and customer satisfaction are often negatively affected by downtime. The stakes are highest when a successful cyber-attack leads to negative publicity.<sup>2</sup>

## JAVA PATCHES AND SECURITY UPDATES

Java 8 updates have been released by Oracle since April 2019. These releases, when used for production, require a subscription unless it is being used with an Oracle product (personal and development use do not need a subscription). JDK 11 updates are available under the same terms since Sep 2019. Updates for JDK 17 will be released the same way after September 2024. What does this mean for your organization? From extensive experience working with Java partners, we are aware that most large organizations run several versions of Java for a variety of reasons. Some organizations have constrained their applications to particular Java versions. By providing greater flexibility around the Java versions that are maintained, Java SE Universal Subscription is designed to accommodate these business needs.

Use Java SE Universal Subscription's term-based licensing and support to maintain your flexibility around the transition point between versions while at the same time making sure that your Java platform remains stable and up to date. Keeping out-of-date versions of Java on your system may present a security risk, so customers should always install updates to get the latest performance, stability, and security improvements.

Your organization may be subject to corporate or industry-wide obligations, specifically keeping your software platforms supported and up to date with all available security patches installed. Java SE Universal Subscription makes it easy for you to meet these obligations.

- Remain on a fully updated Java LTS release even after that version reaches the end of permissive licensing, thereby controlling your upgrade path.
- Streamline running different Java versions side-by-side, thereby managing certified compatibility for different applications.

## ENTERPRISE CLASS PERFORMANCE FOR JAVA

- Subscribers and OCI users running JDK 8 server workloads have access to the Java SE Subscription Enterprise Performance Pack (Enterprise Performance Pack). The performance pack delivers dramatic improvements developed from JDK 9 to JDK 17 into your JDK 8 workloads. These include significant memory management and performance improvements like the ultra-low-latency garbage collector ZGC from JDK 15 and the memory savings from JDK 9's compact strings. With this drop-in replacement for JDK 8, customers running workloads near memory or CPU capacity can see immediate benefits. Internal and partner testing shows improvements in both memory usage and performance of heavily loaded applications of up to 40%.
- Your subscription also includes Oracle GraalVM, a high-performance runtime with polyglot capabilities for modern microservices. GraalVM Native Image offers substantial startup improvements and further memory savings with ahead-of-time compilation. More information on GraalVM can be found in its [datasheet](#).

## JAVA SE UNIVERSAL SUBSCRIPTION

The enterprise-wide, term-based Java SE Universal Subscription model includes cloud deployment, server, and desktop licensing and support.

- Simple per-Employee pricing starting at \$15/employee/month and lower depending on volume.
- Eliminates issues of precisely accounting for JDK instances in bare-metal, virtualized, and containerized servers and desktops, on-premises, and in clouds.
- Triage support for your entire Java portfolio, including third-party libraries and runtimes.

### Java SE Universal Subscription summary

- Cover all Java SE licensing needed for Enterprise Cloud, Server, and Desktop deployments.
- Protect your Java SE investments by receiving performance, stability, and security updates to a variety of versions.
- Manage your Java applications portfolio with maximum flexibility; update any Java versions you are running on your own time schedule.
- Remain up to date on the most current Java updates and security fixes.
- Achieve control and management of Java SE 8 Desktop use across the enterprise.
- Minimize your Java deployment, monitoring, and maintenance costs.

### Enterprise performance

- Java SE Subscription Enterprise Performance Pack brings JDK 17 performance for JDK 8 server workloads. Drop-in replacement for JDK 8. Server-side Linux (Intel ARM), 64-bit, headless
- Oracle GraalVM provides a high-performance runtime for modern microservices.
- Enterprise Performance Pack and Oracle GraalVM are each available at no additional cost to Java SE Universal Subscription customers and Oracle Cloud Infrastructure (OCI) users

- Broad Internal Use License rights, including Desktop, Cloud, and on-premises workloads.
- Commercial Features, including the Java SE Subscription Enterprise Performance Pack. Advanced management and deployment tooling with security risk detection capabilities.
- Performance, stability, and security updates across newest and older Oracle Java SE releases.
- Entitlement to Oracle GraalVM (see the [GraalVM data sheet](#) for further details).
- Oracle Support via MOS (My Oracle Support)

## RESOURCES

- More information on the Java SE Universal Subscription solution can be found here: <https://www.oracle.com/java/java-se-subscription>.
- Java SE Subscription Enterprise Performance Pack blog can be found here <https://blogs.oracle.com/java/post/introducing-the-java-se-subscription-enterprise-performance-pack>.
- The GraalVM product sheet can be found here: <https://www.oracle.com/java/graalvm>

Take a quick health check of your Java environment to see if you are leveraging the many tools, features and assets that can help you get the most from your Java investment. Connect with your Customer Success Managers at X@oracle.com to get additional expert support to ensure your Java journey is a success.

### Common questions regarding managing Java SE across your enterprise

QUESTION	BUSINESS SCENARIO AND IMPACT	SOLUTION
<p>How many versions of Java are in your organization?</p> <p>How many do not have the latest performance and security fixes applied?</p>	<p>Different application areas within a business are often managed by separate teams, often lacking a central policy to manage Java deployments. While Oracle publicly provides performance and security updates on the latest release of Java, production use of updates to prior versions requires a Java SE Universal Subscription.</p>	<p>Use the Java SE Universal Subscription robust monitoring tools for enterprise-wide Java visibility to audit and manage which versions, updates, and security patches are used in your enterprise. In addition, gain access to all patches for the Java SE platform for all major releases.</p>
<p>Have you updated all Java applications to the latest release?</p> <p>Are you working with the latest early-access releases?</p> <p>What are your plans for moving to the next Long-Term Support release?</p>	<p>Transitioning between Java versions sometimes requires lengthy and potentially costly QA cycles. You may not have sufficient in-house Java expertise or resources to upgrade all applications to the latest version in a timely fashion. Applications may not be business-critical or may have been stable for many years. However, older versions could be putting your business at risk due to a lack of patching and support.</p>	<p>Java SE Universal Subscription includes all patches and global support for the Java SE platform for all major releases. Java SE Universal Subscription, through its provision of Java patches for older versions, enables you to remain on those versions for longer because the latest performance, stability, and security improvements for the Java platform are applied. Java SE Universal Subscription includes access to support, so solving any transition issues from third-party dependencies can be more easily overcome.</p>
<p>What versions of Java are installed across your organization's desktops?</p> <p>How are Java updates managed?</p>	<p>You may have a limited view of the extent of Java usage across the organization. In many organizations, updates are sporadic and managed on an ad-hoc basis by individual teams or individuals, especially in desktop environments. This highlights a lack of control of a core component of the enterprise platform.</p> <p>With the use of virtualized and containerized server environments, this problem can be made harder to manage. The client-side becomes increasingly more challenging as virtual desktops become more pervasive.</p>	<p>Java SE Universal Subscription provides access to tools and updates to help you manage your organization's desktops. The tools help manage "Deployment Rule sets," enabling support of challenging and sometimes conflicting requirements.</p>
<p>Can you report on your Java install base in the</p>	<p>If you store sensitive information, you may be subject to periodic PCI or HIPAA Audits where</p>	<p>The management elements of Java SE Universal Subscription enable you to maintain control of</p>

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event of an industry compliance review? (e.g., HIPAA)	you need to show that the environment is supported and up to date with the latest security patches and updates.	your various Java SE environments and report on the various versions in use throughout your organization.
How do you know whether you're potentially vulnerable to a security issue like Log4jShell?	Patching and maintaining the latest versions of the JDK isn't the end of Java related security considerations. Applications have 3 <sup>rd</sup> party dependencies. The industry's answer to this through Software Bill of Materials (SBOM) is still maturing having additional checks can help us avoid such issues.	Using Oracle JDKs combined with the Java Management Service provides a level of insight into application dependencies and the libraries they use, including the reporting of possible CVEs (Common Vulnerabilities and Exposures), allowing mitigation and resolution actions to be taken. As a result, the organization moves from not knowing risks to being able to manage them.
How do you deal with any potential Java platform issues?	<b>If an issue relating to the Java platform arises and you do not have access to support, you may have to resort to searching the Internet for solutions. Solutions found online may not be accurate, current, or efficient. Researching and testing fixes costs time and money and could incur high costs and possible application downtime.</b>	<b>Java SE Universal Subscription gives you access to Oracle's expert global Java support team. You have an immediate resolution route for Java issues, the risk is reduced, and the risk of downtime is reduced or removed.</b>

<sup>1</sup> Wikibon 2019 Java survey data from 59 large enterprises, with > 30,000 employees and > 50 Java applications.

<sup>2</sup> IDC, Protect Applications by Integrating Security into DevOps, #US43015217

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