

# Zulu®: Tested, certified, multi-platform builds of OpenJDK™

## Open Source Java Standard Edition for Linux, Windows, Solaris, and macOS

### INTRODUCING ZULU COMMUNITY and ZULU ENTERPRISE

**Zulu Community** builds of OpenJDK are fully certified and 100% open source Java Development Kits (JDKs) for all Java development and production workloads. Zulu builds are free to download and use without restriction, and are built from source code maintained by the OpenJDK Project (openjdk.java.net). Zulu builds are designed to allow companies to leverage the latest advances in Java Standard Edition (SE) for all Java-centric use cases. Zulu supports multiple operating systems (Windows, Linux, macOS, Solaris), processor architectures (x86, Arm, and SPARCv9), bitness (32- or 64-bit), Java patch levels, and disk and memory sizes where Compact Profiles (Java 8 only) may play a part in container deployment strategies. *Zulu supports more platforms and binary file types than any other free OpenJDK distribution.*

With extended support for multiple Java versions (e.g. JDK 11, 8, and 7), **Zulu Enterprise** is ideal for organizations and businesses that require regular Java security updates backed by strict SLAs (and also including bug fixes and critical patches), plus support for older or end-of-life versions of Java.

### ZULU IS OPEN SOURCE JAVA

Each Zulu binary is verified compliant with the Java SE specification using the OpenJDK Community Technology Compatibility Kit (TCK) licensed from Oracle. The TCK is a suite of more than 120K unit tests which ensure that each binary build of OpenJDK meets all the specifications of the umbrella and individual Java Specification Requests for a given version of the Java SE platform (e.g. Java 11). **Zulu Enterprise** binaries carry additional intellectual property (IP) rights granted by passing the TCKs as defined by the Java Specification Participation Agreement and provides extensive IP rights to compatible and specification compliant implementations. Verified Zulu Enterprise builds also undergo license non-contamination certification by Azul and provide broad indemnification against license contamination issues.

### TIMELY SECURITY UPDATES

Azul provides **Zulu Enterprise** customers with continuous access to the latest Java Critical Patch Updates (CPUs) for all supported Zulu versions (e.g. Java 11, 8, and 7). These quarterly CPUs contain Java SE security updates, and are designed for rapid deployment in production. Security issues are ranked depending upon the severity of the vulnerability, as defined by the National Institute of Standards and Technology (NIST) Common Vulnerability Scoring System version 3 (CVSS v3).

### 24x7x365 SUPPORT OFFERINGS

While Java is a mature language, the Java runtime is a complex piece of code with no guarantees that every build is completely bug-free or secure. Azul's commercial offerings include a dedicated Support team that can i) triage Java problems, ii) identify offending code (i.e. perform root cause analysis) and iii) issue temporary patches or security fixes without any dependency on any other company. **Zulu Enterprise Platinum Support customers now have access to an industry-leading 48-hour support SLA for all critical security issues.** With more than 16 years delivering mission-critical support for Global 1000 accounts, Azul has the dedicated Engineering and Support staffing and deep Java domain expertise to provide the high-quality support and innovation that development and operations teams need to ensure their applications keep running smoothly.

#### ZULU BENEFITS

- › **100% Open source**  
Zulu builds are based on the OpenJDK open source project and licensed under GPL v2 with Classpath Exception. They meet the Java Standard Edition (SE) specifications for Java 11, 8, and 7.
- › **New extended capabilities**  
**Zulu Enterprise** subscriptions include full support for **Flight Recorder** and **JDK Mission Control** in builds of OpenJDK 8 and 11. Zulu builds with OpenJFX support are available for OpenJDK 8.
- › **Free to download and use without restrictions**  
Builds of Zulu are available from the Azul website and Azul repositories, and can be readily and easily integrated into your development and production processes.
- › **Fully supported by Azul**  
With cost-effective and tiered support options, Azul's globally distributed team has over 16 years of experience supporting mission-critical Java deployments.
- › **Timely security updates**  
In January 2019, Oracle ended free public updates (security patches and platform-level bug fixes) for JDK 8 and JDK 11, leaving Java-based businesses with a difficult set of alternatives. **Zulu Enterprise** is a cost-effective way to gain guaranteed access to Java security and stability updates.

## Zulu Features



- 100% open source builds of Java SE
- Built from OpenJDK sources
- Free to download and use, with cost-effective support options
- Verified using OpenJDK Community TCKs
- Performance parity with Oracle HotSpot
- Full Docker and Linux container support
- Industry-leading multiplatform support:
  - Java 11, 8, and 7 plus future Long Term Support (LTS) releases
  - Medium Term Support for JDK 13 and 15 (18 month bridge to LTS builds)
  - Windows, Linux (including Alpine Linux), Solaris, and macOS
  - x86, SPARC, and Arm processor support
- Continuous, timely access to Java CPUs, security patches and bug fixes
- Extended product life cycles and selective access to preview and other feature builds, including JDK 12

### Target Operating Systems

RHEL 7.0 or later, 6.0 or later  
 CentOS 7.0 or later, 6.0 or later  
 Oracle Linux 7.0 or later, 6.0 or later  
 SLES 12 (SP2 and SP1)  
 SLES 11 (SP4 and SP3)  
 Ubuntu 18.04 LTS, 16.04 LTS, and 12.04 LTS  
 Debian 9.0 (Stretch), 8.0 (Jessie) and 7.0 (Wheezy)  
 Amazon Linux  
 Container Linux by CoreOS 4.7 or later  
 Alpine Linux 3.5 or later  
 Windows Server: 2018, 2016, 2012 R2, 2012, and 2008 R2 Windows Client (64-bit OS): 10, 8.1, 8 and 7  
 macOS v10.09 or later  
 Solaris v11, v10

### New Enhanced Capabilities

**Flight Recorder and Zulu Mission Control** with Zulu Enterprise Subscriptions  
**OpenJFX** support option for Zulu 8  
 Free Community builds of OpenJFX for Zulu 8 and 11

### Virtual Environments

Docker, VMware, Hyper-V, KVM

### Cloud

Amazon AWS (EC2 and S3)  
 Microsoft Azure, Google Cloud, and private Clouds

### Java Versions on x86

Java SE 11, 8, and 7 for x86-64 and x86-32

### Java Versions on Arm

Java SE 8 and 11 for ARMv8 64-bit

## Zulu Enterprise: Backed by the industry's best support SLA

Azul Systems offers world-class support services for Zulu Enterprise. Our highly trained customer support engineers have extensive Java experience and deep knowledge of the JVM, memory management, Java performance issues, and usage of production application visibility tools. Three levels of enterprise technical support subscriptions are available for Zulu Enterprise:

	Standard	Premium	Platinum
<b>Quarterly releases</b>	★	★ Out-of-cycle bug fixes & early release access	★ Out-of-cycle bug fixes & early release access
<b>Support hours</b>	Business hours	24x7x365	24x7x365
<b>Channels</b>	Limited tickets & phone/email/web support	Unlimited tickets & phone/email/web support	Unlimited tickets & phone/email/web support
<b>Maximum Support SLA guarantee</b>	15 days	7 days	48 hours

### AZUL'S SUPPORT LIFECYCLE FOR THE FUTURE OF JAVA DATES

In September, 2017, Oracle announced that Java SE was moving to a 6-month release cadence. New "Feature" releases will appear in March and September of every year. The next feature release after Java 9 was Java 10, which was released March 20, 2018.

- Long Term Support (LTS) releases of Java will happen every 3 years. The next LTS release after JDK 11 is Java 17 (planned for September 2021).
- Java 9 and 10 were feature releases with very short support lifespans (only 6 months after initial release). In addition, Oracle ended free public updates for JDK 8, creating a "support cliff" after January 2019. The first non-Oracle updates for Java 8 and 11 will be delivered by the OpenJDK community as part of the April CPU.

### CHOOSE THE BEST FREE BUILDS OF OPENJDK, OR INDUSTRY'S BEST OPENJDK SUPPORT

Backed by a team of JVM engineers that is second in size only to Oracle, Azul's free community builds of Zulu are available for more file types, operating systems, and major releases of Java than any other freely-downloadable builds of OpenJDK.

Zulu Enterprise Support plans are designed to ensure that Java users have rapid access to timely security updates, back ported fixes, innovative features and IP protection that meet the needs of development, QA and Operations teams responsible for essential Java-based applications, infrastructure and performance.