Red Hat build of OpenJDK

An alternative to OracleJDK

Key benefits

▶ Open source innovation

▶ Cost savings

▶ Multiplatform support

▶ Long-term support

▶ Frequent releases

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Overview

An estimated 15 billion devices run Java™ worldwide. Until January 2019, no one had to pay for access to a current Java virtual machine (JVM) but Oracle implemented a significant change to its release cadence and support model multiple times since then. Oracle JDK is not free for production workloads and patches, leaving organizations with a choice to either pay Oracle for continued production support and updates for Oracle JDK or migrate to an alternative OpenJDK implementation.

Red Hat® build of OpenJDK is a free and open source implementation of the Java Platform, Standard Edition (Java SE). It is an alternative that will allow your organization to stabilize and standardize your Java environments for years to come with little to no transition effort or traditional licensing hassles.

Benefits

Red Hat's build of OpenJDK is an alternative to OracleJDK with a number of features and benefits.

Table 1. Benefits

Benefit	Description
Open source	Red Hat is a member of OpenJDK governing board and the largest contributor after Oracle.[1]
Cost	OpenJDK support is included in Red Hat Enterprise Linux®, Red Hat OpenShift®, and Red Hat Application Services subscriptions. A standalone Windows subscription is also available for purchase.
Multiplatform support	OpenJDK is tightly integrated with Red Hat Enterprise Linux and is also supported on Windows, SUSE Linux Enterprise Server (SLES), Ubuntu, and MacOS (development support).
Long-term support	Red Hat provides long-term support for OpenJDK versions 8, 11, and 17.
Frequent releases	Red Hat expects to deliver four updates per year for the OpenJDK 8, 11, and 17 distributions, in addition to, timely security fixes.

Life cycle support

All Red Hat distributions of OpenJDK are supported for development and production for all Java workloads, giving you the confidence to develop, test, and deploy in Windows or Linux-based environments. Red Hat expects to deliver four updates per year, approximately three months apart, for the OpenJDK 11 and 17 distributions.

Table 2. Red Hat Enterprise Linux version support and life cycle dates

OpenJDK	RHEL 6	RHEL7	RHEL 8	RHEL 9	End of support
8 (1.8)	6.6	7.1	8.0	9.0	November 2026
11	N/A	7.6	8.0	9.0	October 2024
17	N/A	N/A	8.4	9.0	October 2027

Table 3. Windows version support and life cycle dates

OpenJDK	Server 2012 R2, 2016	Windows 10 and 11	Windows Server 2019	Windows Server 2022	End of support
8 (1.8)	Y	Y	Y	Y	June 2023
11	Y	Y	Y	Y	October 2024
17	Y	Y	Y	Y	October 2027

Red Hat also supports OpenJDK on SLES, Ubuntu, Windows 64 and 32-bit, and development support for MacOS.
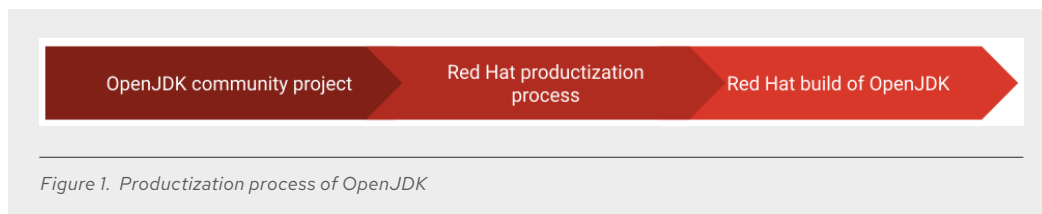
An OracleJDK alternative

OpenJDK and OracleJDK are implementations of the same Java SE specification. In 2017, Oracle committed to open sourcing the remaining Java SE tools with the goal of making OracleJDK and OpenJDK interchangeable. While some minor differences still exist, OpenJDK 11 and OracleJDK 11 are now functionally interchangeable.

Red Hat build of OpenJDK is also based on the OpenJDK project. All of the additional work done by Red Hat is implemented in the OpenJDK community first, which means our customers can run their applications on a certified OpenJDK build. Red Hat build of OpenJDK passed the Java Technology Certification Kit (TCK) from Oracle to ensure it is in compliance with the Java specification.

![Red Hat logo]

Red Hat build of OpenJDK

Red Hat offers comprehensive production support for Red Hat build of OpenJDK and commercial support for Eclipse Temurin. This support includes vulnerability exposures, security notification and fixes, and service level agreements.

Figure 1. Productization process of OpenJDK

Our productization process includes activities such as feature engineering, enhanced security testing, testing, creation of deployment artifacts, product integration, and documentation. Red Hat is committed to the open source community and is the second leading contributor to the OpenJDK project. Most of the productization work Red Hat does can be contributed to the OpenJDK upstream project.

Commercial support for Eclipse Temurin

Eclipse Temurin is a relatively new distribution of OpenJDK from the Eclipse Adoptium community. This community originated with the AdoptOpenJDK project, which has enjoyed tremendous popularity across the industry as a source of high-quality OpenJDK builds across many platforms, with close to half a billion downloads[2].

Red Hat is a founding strategic member of the Adoptium Working Group. Microsoft, Azul, IBM, Alibaba, and Huawei are some of the other members also participating. Red Hat provides support for Eclipse Temurin together with Red Hat Build of OpenJDK.

Entitlements

Support for the Red Hat build of OpenJDK and Eclipse Temurin is included or available via the following subscriptions:

▸ Red Hat Enterprise Linux

▸ All Red Hat Application Services subscriptions

▸ Red Hat build of OpenJDK for Windows (for non-Red Hat Application Services Java workloads)
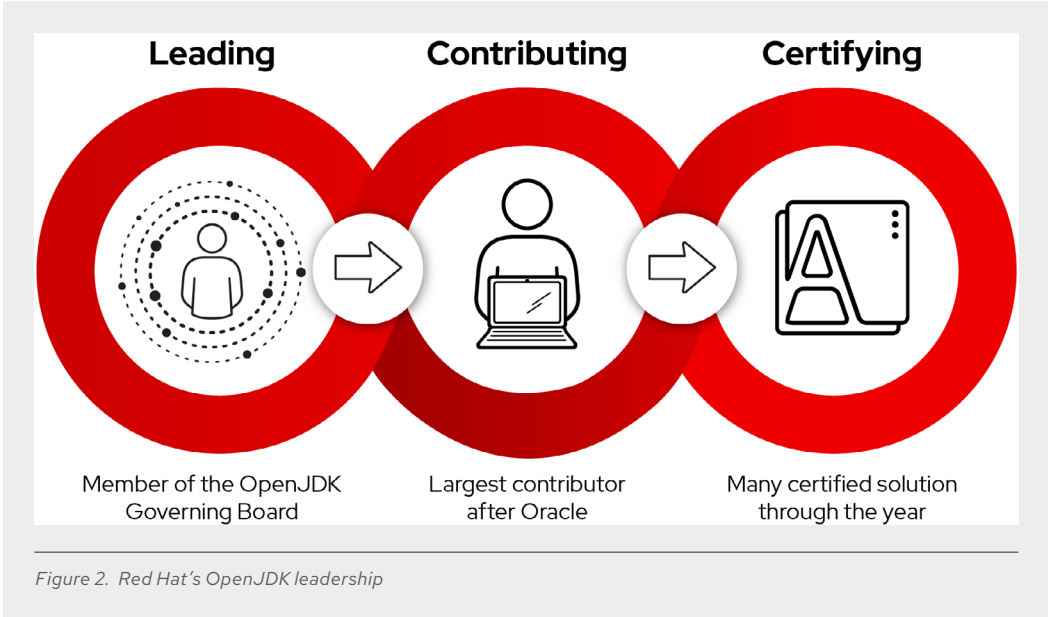
Long history with OpenJDK

Red Hat has had a long history with OpenJDK dating back to 2007 when Red Hat became the first major software vendor to contribute to the OpenJDK community. Red Hat is also a member of the OpenJDK governing board[3] as well as the largest contributor[4] after Oracle, providing many certified solutions over the years. Red Hat has also served as the stewards of OpenJDK 8 and 11 projects.

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2 *"AdoptOpenJDK download stats." Adoptium, accessed 21 February 2023.*

3 *"OpenJDK governing board." Oracle blog, accessed 21 February 2023.*

4 *Chander, Sharat. "The Arrival of Java 19." Oracle blog, 20 Sept. 2022.*

Figure 2. Red Hat's OpenJDK leadership

Leading — Member of the OpenJDK Governing Board

Contributing — Largest contributor after Oracle

Certifying — Many certified solution through the year

About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. A trusted adviser to the Fortune 500, Red Hat provides award-winning support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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🐦 @RedHat
in linkedin.com/company/red-hat

North America
1 888 REDHAT1
www.redhat.com

Europe, Middle East, and Africa
00800 7334 2835
europe@redhat.com

Asia Pacific
+65 6490 4200
apac@redhat.com

Latin America
+54 11 4329 7300
info-latam@redhat.com

redhat.com
#229751_0223