

Java Continua Livre (E Grátis)

Com as mudanças recentes na distribuição e suporte da JDK da Oracle, há uma incerteza sobre os direitos de utilizar a JDK Oracle x builds do OpenJDK da Oracle x builds do OpenJDK de outros provedores. Também há considerações sobre atualizações gratuitas, e (novos e existentes) modelos de suporte disponíveis por vários vendedores para serem considerados. Esse documento tem uma [versão curta](#) e uma [versão muito mais longa](#) com todos os detalhes.

(Tradução por @leomrlima, @otaviojava, @elderjava, @brjavaman da [versão 1.0.0](#) às HIJ)

Versão Curta

Você ainda consegue ter a JDK da Oracle, builds do OpenJDK da Oracle e builds do OpenJDK de outros provedores de graça (e de forma livre - veja o quadro e o resto desta seção para as nuances disso). Isso é possível porque múltiplos provedores oferecem implementações da especificação do Java SE.

Java SE / OpenJDK / Build do OpenJDK da Oracle / JDK da Oracle

A comunidade do [OpenJDK](#) cria e mantém a Implementação de Referência (Reference Implementation (RI)) código-aberto (GPLv2+CE) da Especificação do **Java SE** como governado pelo [Java Community Process](#) (JCP) e que é definido como uma Java Specification Request (JSR) guarda-chuva para cada release futuro.

Existem implementações do Java SE de diversos provedores (como Azul, Eclipse, IBM, Red Hat, Oracle, SAP, e outros), o mais comum sendo o **JDK da Oracle (Oracle JDK)**.

Oracle JDK 8 está no [processo](#) de "*Fim de Atualizações Públicas*" o que significa que não haverá mais atualizações gratuitas para fins comerciais ao final de Janeiro de 2019. Porém, desde o Java SE 9, a Oracle está disponibilizando também o [builds OpenJDK](#) que são livres para uso comercial, e há também builds gratuitos do **OpenJDK** de outras empresas como [AdoptOpenJDK](#), Azul, IBM, Red Hat, Linux distros e outros.

Essas empresas provaram que suas implementações atendem a todos os requisitos da especificação Java SE ao passarem pelos testes de Technology Compatibility Kit (TCK).

Para o futuro, há várias opções para conseguir um JDK. Vamos focar no Java SE 8 (que será válido até o fim das atualizações públicas, assim como as versões anteriores), e o Java SE 11 que será a primeira versão Long Term Support (LTS) a ser lançada sob a nova cadência de versões.

Continuando com o Java SE 8

Algumas pessoas querem continuar utilizando o Java SE 8 por vários motivos.

1. Oracle proverá atualizações públicas do Oracle JDK 8 até, pelo menos, Dezembro de 2020, para uso em computador pessoal e Janeiro de 2019 para uso comercial. Depois disso, os usuários podem ou ir para o plano pago ou utilizar o binário de Java SE 8 / OpenJDK 8 de outra empresa.
 - a. Você pode também continuar utilizando o Oracle JDK 8 por tempo indefinido *sem updates*.
2. Caso você **não esteja** utilizando o Oracle JDK 8, então o seu atual provedor de Java SE 8 / OpenJDK 8 proverá atualizações de maneira grátis e/ou planos de suportes pagos para você escolher.

EU QUERO UMA VERSÃO GRÁTIS (\$) E LIVRE (PARA USO) DO JAVA SE 8, QUAL EU ESCOLHO?

Se você quer atualizações do Java SE 8 depois de Janeiro/2019, você pode utilizar uma distribuição binária do OpenJDK de algum provedor do OpenJDK, por exemplo com distribuições Linux, [AdoptOpenJDK](#), [Azul](#), [IBM](#), [Oracle](#), [Red Hat](#), e outros.

Usando Java SE 11 (LTS)

Você tem várias opções. Leia com atenção, em especial dado que o Oracle JDK está mudando a partir do Java SE 11.

1. [A partir do Java SE 11, a Oracle passa a fornecer seu próprio JDK \(baseado no OpenJDK\)](#) através de:
 - a. [Binários OpenJDK da Oracle](#) - sob licença Open Source existente GPLv2+CE, e
 - b. [Oracle JDK](#) - Sob uma licença comercial paga (mas gratuita para desenvolvimento), para aqueles que não desejem utilizar a GPLv2+CE, ou que estejam utilizando o Oracle JDK com um produto ou serviço da Oracle.

NOTA: A Oracle planeja fornecer atualizações para seus Binários do OpenJDK por duas atualizações trimestrais e posteriormente [migrar os usuários para a próxima versão](#), a cada seis meses (incluindo a versão LTS)

2. Você também pode utilizar as distribuições binárias do Java SE / OpenJDK de diversos outros fornecedores, incluindo distribuições Linux, [AdoptOpenJDK](#), [Azul](#), [IBM](#), [Oracle](#), [Red Hat](#), e outros. . Isso inclui atualizações por períodos variados, dependendo se é uma versão LTS ou não.

EU QUERO O JAVA SE 11+ GRÁTIS (\$) E LIVRE (PARA USO), O QUE ESCOLHO?

1. Use o [binário Oracle OpenJDK](#) sob a licença Open Source (GPLv2+CE) e siga a cadência de seis meses para cada versão **OU**

2. Use um binário OpenJDK de um fornecedor alternativo, por exemplo, distribuições Linux, [AdoptOpenJDK](#), [Azul](#), [IBM](#), [Red Hat](#), e outros.

Suporte Pago

A Oracle planeja fornecer suporte pago para o Oracle JDK 8 até pelo menos 2025 e para o Oracle JDK 11 até pelo menos 2026 ([detalhes](#)). Existem uma variedade de [opções de suporte](#) para binários Java SE / OpenJDK 8 e 11 de fornecedores como Azul, IBM, Red Hat, e outros.

Essa página é mantida deliberadamente em branco para separar a Versão Curta da Versão Longa.

A Versão Longa

Essa seção deliberadamente tem muitos detalhes pois há nuances que precisam ser claramente explicadas. Por favor, faça um favor a você e seus colegas e separe um tempo para ler esse documento completamente e com atenção. Você irá se agradecer depois, sinceramente.

Nós também gostaríamos de agradecer Simon Ritter, Stephen Colebourne, Hendrik Ebbers, Donald Smith, Jonas Konrad e muitos outros por suas postagens anteriores e permissão para reutilizar seu material. O [Apêndice I - Signatários, Agradecimentos e Referências](#) contém a lista completa de atribuição e o signatários desse documento.

Comentários são bem-vindos! Use [esse link](#) (em inglês) para fazer sugestões, edições e comentários.

Change Log

Este documento será atualizado ao longo do tempo à medida que novas informações forem reveladas ou se houver uma correção verificada em alguns dados factuais. Por favor, volte aqui para atualizações e / ou siga o nosso Twitter [@Java_Champions](#).

Versão	Data	Comentário
1.0.0	17 Set 2018 1100 GMT	Lançamento Público Inicial

Disseminação

[Essa planilha](#) está rastreando a disseminação conhecida deste documento. Por favor, atualize se você compartilhar este documento!

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Introdução

Com as recentes alterações na distribuição e no suporte do Oracle JDK, houve uma incerteza considerável sobre o futuro do Java, sobre os ciclos de vida do software e sobre o suporte fornecido pelo fornecedor. Este documento resume as alterações que a Oracle está realizando e as opções disponíveis para usuários do Java SE.

O QUE QUEREMOS DIZER POR LIVRE?

Em resumo, a palavra "**livre**" (*free*) tem dois significados distintos em software:

- **Grátis** ("*Free as in beer*") se refere ao custo (ou seja, dinheiro) do software (também conhecido por **\$free**).
- **Livre** (**Livre como na fala**- "*Free as in speech*") refere-se ao que você pode fazer com o software.

Como explicado na [versão mais curta](#), você ainda pode obter binários do Java SE de forma gratuita da Oracle e de outros provedores do Java SE / OpenJDK.

Embora existam implementações proprietárias e / ou restritas de uso do Java SE por aí (Zing da Azul, JDK da Oracle etc), para a grande maioria dos usuários há sempre a opção de usar um binário OpenJDK, que é "**livre como na fala**" é licenciado com [GPLv2 + CE](#).

Essas mudanças ocorreram dentro de um curto período de tempo, criando uma tempestade de incertezas, à medida que os desenvolvedores do dia a dia, que não acompanham de perto as notícias do setor, se atualizam. Isso leva a postagens factualmente incorretas como:

- [DZone Article - Is Java in Jeopardy?](#)

Quais são, felizmente, contrabalançados por posts mais precisos como:

- Donald Smith (Diretor Sênior, Gerência de Produtos da Plataforma Java - Oracle) - [Update and FAQ on the Java SE Release Cadence](#)
- Simon Ritter (Vice CTO - Azul) - [Eliminating Java Update Confusion](#)
- Stephen Colebourne (Autor da Joda-Time) - [Java is still available at Zero Cost](#) e [Java Options](#)
- Hendrik Ebbers (Co-fundador Karakun) - [Do I need to pay for Java now?](#)

Este artigo cobrirá as principais áreas de preocupação e o que está sendo feito sobre essas preocupações pelo ecossistema. No final deste post, você deve ter certeza de que o Java SE ainda está sendo bem tratado e que tem um futuro mais forte do que nunca!

O Novo Ciclo de Lançamento de Seis Meses e LTS

O Java SE agora tem [uma nova versão a cada seis meses](#), usando um novo esquema de versionamento que foi [anunciado](#) anteriormente em 2017. Graças aos aprimoramentos nos processos do JCP, os committers do OpenJDK agora podem introduzir recursos que alteram a especificação (como `var` no Java SE 10) a cada seis meses.

WHAT DOES LTS MEAN WITH REGARDS TO JAVA / OPENJDK?

Long Term Support (LTS) in OpenJDK is really just an understanding between the various contributors (led by Oracle) that the code line for Java SE 11 / 17 / 23 etc will be maintained for a longer period of time than six months.

Oracle will lead the first six months of an OpenJDK LTS code line, providing updates and producing Oracle OpenJDK builds, but will then afterward only provide updates for Oracle JDK, under a paid support plan.

However, Oracle will work with other OpenJDK vendors to hand over the OpenJDK LTS code line and allow them to continue working on it together to provide updates. Each vendor then has the choice of providing updates and/or paid support for the binaries they produce.

NOTE: This does mean that Oracle's JDK could differ from the OpenJDK based binaries produced by other providers (this has always been the case). That said, as long as the binaries pass the TCK, you're assured that those binaries are compatible with the Java SE standard.

Understanding the new versioning scheme (including what LTS means) and how new features are introduced impacts how each version is maintained. By maintenance, we mean the provision of update releases with security patches and important bug fixes.

UPDATES vs SUPPORT

Updates refer to the code patches that have gone into OpenJDK and Oracle JDK. These have typically gone in for free, until vendors decide that there's an *End of Public Updates* [process](#).

Support means a commitment to fix bugs and it requires staff to answer users' problems, and that costs money. To be clear there has *never* been free support for Oracle JDK or OpenJDK.

Up to and including OpenJDK 8 / Oracle JDK 8, updates were provided by Oracle and other OpenJDK committers *within* a "feature release". Feature releases, such as 8u91, 8u111 and 8u131 (on a six-month cadence) were superseded by each subsequent feature release. For example, once 8u111 was released, you would not get updates on 8u91.

Starting with OpenJDK 9 / Oracle JDK 9, the new six-monthly release cycle came into effect and updates now occur *between* "feature releases", i.e. Similar to 8u91 -> 8u111, once 12 is released, you will not get updates to 11 by Oracle (However, other OpenJDK committers, likely lead by Red Hat, will provide these).

Oracle Updates Plan

Until Java 8, Oracle provided updates for the Oracle JDK for a 3+ year lifecycle, and usage was permitted in personal as well as commercial settings. The updates provided no support, and support required the purchase of explicit licenses from Oracle. Paid support also entailed longer update cycles.

Starting with Java 9, Oracle has moved to a [faster cadence](#) for Oracle JDK and also started producing Oracle OpenJDK builds. Updates will generally be provided for 6 months before they are stopped upon release of the next version. If updates/support are required for a longer duration, or for production use, then it must be purchased from Oracle (i.e. You must be on Oracle JDK). Periodically, releases will be marked "LTS". These releases will be supported by Oracle through their standard support licenses for an extended period. As of right now, the Oracle update plan for Oracle OpenJDK builds, with updates, is as follows:

Oracle OpenJDK Build Version	Release date	Free updates superseded / ended (by Oracle)
8	March 2014	At least through January 2020 (personal desktop use) Ends January 2019 for commercial use
9	Sept 2017	Superseded by Oracle OpenJDK build 10
10	March 2018	To be superseded by Oracle OpenJDK build 11 in Sept 2018
11	Sept 2018	To be superseded by Oracle OpenJDK build 12 in March 2019 (this may be extended).
12	March 2019	To be superseded by Oracle OpenJDK build 13
13	Sept 2019	To be superseded by Oracle OpenJDK build 14

The idea here is simple. As has been the model of Java SE going way back to the Sun era, Oracle focuses on new innovations and moving Java SE forward. Organizations who wish to remain on legacy versions can do so via commercial support offerings. Of course, for some Java SE users and development shops, such rapid upgrade is not feasible.

OpenJDK Updates Plan

The [OpenJDK](#) community works on a free, open-source implementation of the Java SE standard. Oracle contributes heavily to the project, and it is the basis for both Oracle OpenJDK builds and Oracle JDK. OpenJDK 11+ is interchangeable with Oracle JDK for applications that adhere to the Java SE standard and are using a build that has been tested against the [TCK](#). Oracle will continue to contribute to OpenJDK while they provide updates for the corresponding Oracle OpenJDK build version. Once that version is superseded, Oracle will cease contributing to that version and start updating the next one.

Oracle has been highly receptive to the idea of community maintenance (for OpenJDK 6 and 7) and will continue to support handover of OpenJDK to the community to a qualified volunteering entity once they have moved on to working on the next version. Red Hat stepped in to globally lead (and provide regular updates to) OpenJDK 6 and OpenJDK 7 projects after Oracle ended updates for them. After Red Hat stopped updating OpenJDK 6, Azul Systems stepped in to lead the project and they continue to provide updates to this day.

Red Hat intends to apply for the leadership of OpenJDK 8 after Oracle stops updating it in January 2019. It is important to note that while Red Hat leads the OpenJDK 6 and 7 projects, they are not the sole contributors. Other vendors provide patches and fixes from time to time as well. With OpenJDK 8, there will be more contribution than ever before from non-Red Hat companies, such as Amazon, Azul, IBM, and others.

For consistency, the OpenJDK update cycle will be extended for the same versions that are deemed LTS for Oracle JDK. As of right now, OpenJDK support cycle is as follows:

NOTE: These times are subject to change and different providers all have slightly different timeline commitments. Therefore we use the term "At Least".

Version	Release date	Free updates superseded / ended (by OpenJDK community members)
OpenJDK 6		Supported primarily by Azul systems
OpenJDK 7		At least through to June 2020 Supported primarily by Red Hat
OpenJDK 8 (LTS)	March 2014	At least through Sept 2023. Red Hat will apply to lead after Jan 2019, and will be supported by Amazon, Azul Systems, IBM, and others.
OpenJDK 9	Sept 2017	Superseded by OpenJDK 10
OpenJDK 10	March 2018	To be superseded by OpenJDK 11 in Sept 2018
OpenJDK 11 (LTS)	Sept 2018	TBA, but comparable to the long OpenJDK 6 / 7 / 8 lifecycles
OpenJDK 12	March 2019	To be superseded by OpenJDK 13
OpenJDK 13	Sept 2019	To be superseded by OpenJDK 14

Java SE / OpenJDK Providers

There are now a large number of Java SE / OpenJDK providers who provide either updates and/or paid support options. The following sections provide a lot of detail, if you prefer a shorter read then Stephen Colebourne's [Java SE 11 Options](#) post gives a summary.

UPDATES vs SUPPORT

Updates refer to the code patches that have gone into OpenJDK and Oracle JDK. These have typically gone in for free, until vendors decide that there's an *End of Public Updates*.

Support means a commitment to fix bugs and it requires staff to answer users' problems, and that costs money. To be clear there has *never* been free support for Oracle JDK or OpenJDK.

Why Would I Choose Commercial Support?

If you need a fix in a timely manner, someone to respond to your user requests, or if you want the reassurance that the binary you use is being backed by a vendor, then Azul, IBM, Red Hat, Oracle et al. all offer choices.

A PHILOSOPHICAL POINT ON PAYING FOR OPEN SOURCE SOFTWARE

The industry at large has settled firmly on Open Source Software as the way forward. Because of its "**Free as in speech**" nature, OSS licenses allow folks to modify and adapt other people's software without fear of punitive action.

Many folks also enjoy the "**Free as in beer**" nature of much OSS software, but this comes at a great cost to the authors! Software developers, like anyone else, need to put a roof over their heads and food on their table. Vendors like Oracle pour vast amounts of money into Java SE (think 10s of \$ Millions per year at the very least) and they do need to somehow pay for that cost.

So although you're certainly not obliged to go with a paid support option with one of the vendors, sometimes it's worth thinking about how you, the end users, can support the Java SE ecosystem to ensure it has a long lasting future!

Provider Summary

Build yourself from Source

Build from Source [OpenJDK, no commercial support, need to self-build]:

- Mercurial: <http://hg.openjdk.java.net/>
- Tarballs (7+): <https://openjdk-sources.osci.io/>
- AdoptOpenJDK: <https://www.github.com/AdoptOpenJDK/openjdk-build>

Free Binary Distributions

Free Builds for Linux, Windows, Mac, etc. [OpenJDK, no commercial support]:

- [AdoptOpenJDK](#) (widest platform range)
- [Azul Zulu](#) (Free updates for 6 months)
- Linux Distros
- [Oracle OpenJDK builds - GPLv2+CE binary distribution](#) (Free updates for 6 months)
- [SapMachine](#)

Commercially Supported Distributions

Commercially supported [all Java SE compliant]:

Azul Systems [OpenJDK base]:

- [Azul Java Product Support Roadmap](#)
- [Zulu and Zulu Enterprise Support Options](#)

IBM [OpenJDK base classes + Eclipse OpenJ9 VM]:

- [IBM Support For Runtimes](#)

Oracle JDK [OpenJDK base]:

- [Commercial Support for Java](#)

Red Hat [OpenJDK base]:

- [General Support information from Red Hat](#)

Linux Distros

The various Linux distros will continue to provide OpenJDK for their respective distributions including but not limited to Debian, Ubuntu, CentOS, Fedora, Mint, Alpine et al.

Support Options

- Linux Distros do not typically offer paid support (the exception being Red Hat for OpenJDK on RHEL).

Important Links

Please visit your distro homepage for more information.

AdoptOpenJDK

[AdoptOpenJDK](#) provides OpenJDK binary distributions (HotSpot and Eclipse OpenJ9) for a very wide range of platforms (Linux, Mac, Windows 32/64, Arm 32/64, z/OS, Solaris, AIX, PPC, s390 and more).

Support Options

- AdoptOpenJDK doesn't offer paid support. It simply provides well-tested binaries (some of which are TCK'd) from OpenJDK and Eclipse OpenJ9 upstream projects.
- IBM offers paid support for OpenJDK (with Eclipse OpenJ9 VM) binaries built at AdoptOpenJDK.

Important Links

- [AdoptOpenJDK](#) home page
- [AdoptOpenJDK Support Plans](#)

Azul

Azul provides OpenJDK binaries (Zulu) as well as a specialized Java platform (Zing).

Support Options

Azul offers an option for all companies that do not want to skip all Java SE versions between LTS releases but cannot switch to the newest version every 6 months. Next, to the support for all LTS releases, where Azul provides 1 more year of support than Oracle, Azul offers support for so-called Medium Term Support (MTS) releases for their Zulu JDK. Here you can buy commercial support for every second Java SE version regardless of if it is LTS or not. The support duration of these versions is different. Azul tries to provide a good time range to prepare a migration to the next version and defines 3 different durations for support of Java SE versions.

Because Zulu is a Java SE distribution targeting server-side applications, Azul does not provide any supported model for Java SE on the desktop. Unlike Oracle, the commercial support of Zulu is not defined per CPU but based on the number of systems. A system is defined as a physical or virtual server. The only difference between standard and premium support is the availability of the support. By buying premium support you can call Azul 24x7.

Important Links

- [Azul Java Product Support Roadmap](#)
- [Zulu and Zulu Enterprise Support Options.](#)

IBM

IBM provides native JDK bundles for AIX, Linux (on x86, Power, zSystems), z/OS and IBM i. IBM offers the IBM SDK for Java SE versions for use with IBM products or platforms and for developer use from [developerWorks](#). IBM also provides OpenJDK (with Eclipse OpenJ9) binaries built and tested at AdoptOpenJDK.

Support Options

For Java SE 7 and 8, IBM still provides security updates and bugfixes. The [IBM support lifecycle](#) will continue to be updated. Based on the new Java SE release schedule IBM has announced that the non-LTS releases will be available as OpenJDK with OpenJ9 binaries from AdoptOpenJDK.

Important Links

- [Eclipse OpenJ9](#)
- [AdoptOpenJDK OpenJ9 Binaries](#)
- [IBM Support For Runtimes](#)
- [IBM JDK Details](#)

Oracle

Oracle now produces two JDK binaries: the traditional [Oracle JDK](#) and an [Oracle OpenJDK build](#).

Support Options

In June 2018, Oracle replaced its legacy “*Java SE Advanced*” perpetual license support product with a Subscription based offering that includes license and support. One of them targets Java SE on the desktop and the other one Java SE on the server, cloud, and Java SE in general. If you do not use Java SE on the desktop the “[Java SE Subscription](#)” will be the right support model for you. If you use Java SE on the desktop for client applications the “*Java SE Desktop Subscription*” product is available. If your software uses a Java SE server and Java SE based clients you can subscribe to both offerings.

Commercial support for Java SE applications on the desktop might become quite important for some companies since Oracle will drop several important desktop features from the JDK starting with Java SE version 11. If you are using Java SE on the desktop we highly recommend to read the following articles:

- [JavaFX Separate Module](#)
- [JavaFX Separate Module Part II](#)
- [JavaFX Separate Module Is Now Available](#)
- [Java client roadmap that was announced by Oracle in 2018.](#)

Important Links

- [Commercial Support for Java](#)
- [Published price list for “Java SE Subscription”](#)

Red Hat

Red Hat produces OpenJDK binaries for various platforms that Red Hat Enterprise Linux runs on.

Support Options

Red Hat won't provide Java SE 9 and 10 releases. The next distribution that Red Hat plans to release is OpenJDK 11 for Red Hat Enterprise Linux 7. Currently, Java SE 8 is the supported release for Red Hat Enterprise Linux and the company will support it until 2023.

Important Links

- [General Support information from Red Hat](#)
- [Unsupported community built binaries Linux/Windows from Red Hat upstream \(ojdkbuilt\)](#)

Java Desktop / Java Web Start / JavaFX

There are a number of changes with Desktop Java SE starting with Oracle JDK 11 that you need to be aware of.

JavaFX / OpenJFX

Starting with Java SE 11, neither the OpenJDK builds or the Oracle JDK binaries include the JavaFX libraries. The JavaFX components will now be delivered as a separate SDK, or as artifacts that can be used via build tools (e.g. Apache Maven, Gradle et al.). As a positive consequence of this decoupling, JavaFX development can now have its own roadmap.

JavaFX is still being developed in [OpenJFX](#), which is a project under the OpenJDK community umbrella. Oracle, other companies and individuals in the wider community are actively developing JavaFX. An automatically synced [GitHub mirror](#) is created as well, lowering the barrier for developers to contribute code and issues to JavaFX.

At the moment builds for OpenJFX are only provided by [Gluon](#). As all the OpenJFX source code is 100% open, others can create or distribute binaries as well. At OpenJFX, a similar approach as the one in OpenJDK is followed, where after releasing JavaFX 11, the focus is on JavaFX 12 and so on. JavaFX developers and users are encouraged to use the latest released version of OpenJFX.

Gluon provides a [Support Plan](#) for companies who want Long Term Support for JavaFX 11.

Java Packager

The `javapackager`, which allows bundling applications and its dependencies with (a subset of) the JVM is no longer part of OpenJFX and is removed from Oracle's JDK and Oracle OpenJDK builds starting with Java 11. A [JEP](#) has been submitted for adding a Java Packaging Tool to OpenJDK. While the new Java Packaging Tool will not be ready for the Java 11 release, Gluon is working on a tool allowing Java 11 applications to be packaged into native images.

Java WebStart

If you are using Java Web Start technology to distribute desktop clients you should take care about the current situation as fast as possible since [Oracle has removed Web Start from Java](#).

- [IcedTea-Web](#) is an alternative you can use
 - IBM will be supporting OpenJDK with OpenJ9 binaries with IcedTea-Web
 - Community builds from Red Hat include a simplified IcedTea-Web installer (ojdkbuilds)
- [Karakun is working on an OSS replacement for Web Start](#) as well

FAQ

We recognize that the post above may not have the information explained in a manner which answers your exact question. So we have a FAQ.

OpenJDK variants vs each other and vs Oracle JDK

Q. Differences between OpenJDK vs Oracle's OpenJDK builds vs Oracle JDK?

We'll just talk about Java 11+ LTS releases here. Oracle JDK and Oracle OpenJDK builds are identical, but are licensed in different ways (commercial and GPLv2+CE respectively).

Oracle JDK / Oracle OpenJDK builds and OpenJDK builds from other providers will be built from the same source for the first six months of updates and should be interchangeable for that period. After six months Oracle JDK / Oracle OpenJDK builds will be built from Oracle's own fork. Other OpenJDK providers will continue to create binaries from the OpenJDK updates project. Oracle JDK / Oracle OpenJDK and OpenJDK builds from the other providers may therefore differ in small ways. Binaries from various parties may, of course, vary over time.

Q. Differences between OpenJDK from (non-Oracle) provider A vs provider B?

We'll just talk about LTS releases here. As has been the case with the Java SE 6 and Java SE 7 updates projects, various providers work together upstream in the OpenJDK community, which provides the common repositories, mailing lists, and other infra to share the work. This means the difference between OpenJDK-based binaries are mostly non-core features, like extended monitoring and diagnostic support. Although there may be small differences in the final binaries (perhaps a provider-specific tool etc) they will all at least have the same security and stability baseline as has been true for many years.

Oracle JDK / OpenJDK 8, 11 End of Public Updates by Oracle

With the Oracle JDK 8 and 11 End of Public Updates for Oracle happening soon, some folks are unclear on the ramifications:

Q. If I stay on Oracle JDK 8 / 11, do I have to pay to get security and bug fixes?

For Oracle JDK 8, for personal desktop use, then no. For commercial use after January 2019, then yes. For Oracle OpenJDK builds starting with Java SE 11, after the initial 6 months of updates, then yes.

Q. If I stay on OpenJDK 8 / 11, do I have to pay to get security and bug fixes?

Not necessarily. As was the case with Java SE 6 and Java SE 7, Oracle works with the OpenJDK community to transition the leadership of OpenJDK update projects to other contributors. This has worked well for over a decade. It is very likely Red Hat will continue this leadership in OpenJDK 8 and OpenJDK 11 updates with help from Oracle and other parties. This means important patches will get selectively backported. You then have the choice of taking downstream OpenJDK based binaries from a variety of providers for free, or as part of a paid support offering. In particular, there is an OpenJDK Vulnerability group which deals with 0-day exploits and CVE's and ensures that fixes get out as quickly as possible.

Q. Will Oracle's JDK 8 and 11 still be available for download (last public release)? For example, a company has software that only runs on Oracle's JDK 8 and they provision a new machine after January 2019?

You can still download older versions of the Oracle JDK up to the point where the [public updates stop](#). There is no reason to expect these archives to be removed. Moreover, Oracle JDK 8 continues to be free for personal desktop use through at least 2020.

Q. Will you need to purchase a license from Oracle to download/run Oracle's JDK 8 / 11 for commercial usages for updates after January 2019?

The Oracle JDK will still be free to download and you can use it freely for **development**, **testing**, and **demos**. However, if you want to deploy it into a production environment you will need to pay for a *"Java SE Subscription"*. This follows the usual *"End of Public Updates"* process which has been in practice for well over a decade. Also, note that Oracle JDK 8 continues to be free for personal desktop use through at least 2020.

Q. If someone is using Oracle JDK 8 to run commercial software, after January 2019 do they need to purchase a license?

No. The user can continue to use Oracle JDK 8 indefinitely without paying. The only cost is if they want to get updates beyond Jan 2019, in which case they will need to purchase an *"Oracle Java SE subscription"*.

Q. What happens to Oracle Java Web Start after January 2019? Does it continue to run or at what point do you need to purchase a license?

Since Web Start is part of Oracle JDK 8 it will continue to work and can be used indefinitely without cost. As above if you need updates (bug fix and security patches) you will need to purchase a *"Java SE subscription"*. If your end users are consumers, they are covered for free until at least 2020 as Oracle JDK 8 will continue to be free for personal desktop use until at least the end of 2020. Oracle has stated that they will continue to support (i.e. provide commercial updates for) Java Web Start at least until March 2025.

There is also [IcedTea-Web](#) as an alternative and [Karakun is working on an OSS replacement for Web Start](#).

Appendix I - Signatories, Thanks and References

Special thanks go to the following folks who paved a road with their earlier blog posts. Many of the links and material in this document were cribbed and collated (with permission) from these sources.

1. [Java Champions](#) - A Community Body of Java Experts
 - a. Simon Ritter (Deputy CTO - Azul) - [Eliminating Java Update Confusion](#)
 - b. Stephen Colebourne (Joda-Time author) - [Java is still available at Zero Cost](#) and [Java 11 Options](#).
 - c. Hendrik Ebbers (Co-founder Karakun) - [Do I need to pay for Java now?](#)
 - d. Johan Vos (Co-founder Gluon) - [JavaFX Release and Support Plans](#)
 - e. Martijn Verburg - Lead Author / Facilitator of this document
 - f. Many others!
2. Oracle via Donald Smith (Senior Director of Product Management)
 - a. [Faster and Easier User and Redistribution of Java SE](#)
 - b. [Extension of Oracle Java SE 8 Public Updates and Java Web Start support](#)
 - c. [The future of JavaFX and other Java Client Roadmap Updates](#)
 - d. [Update and FAQ on the Java SE Release Cadence](#)
 - e. [A Quick Summary on the new Oracle Java SE Subscription](#)
 - f. [Oracle JDK Releases for Java 11 and later](#)
3. Other notable folks
 - a. Jonas Konrad - [Java Support](#)

The following Java ecosystem folks back this document as a fair and balanced record of the state of Java SE / OpenJDK and plans for free updates and/or paid support.

Person	Credentials
Martijn Verburg	AdoptOpenJDK co-lead, Java Champion, London JUG Leader, Member of JCP Executive Committee, Jakarta EE Steering Committee Member, CEO @ jClarity
Hendrik Ebbers	Java Champion, JUG Dortmund Leader, JSR EG member, Co-founder of Karakun
Ivar Grimstad	Java Champion, Malmö JUG Leader, JCP Executive Committee Member, EE4J PMC Lead, Jakarta EE WG Member
Markus Eisele	Java Champion
Heinz Kabutz	Java Champion, The Java Specialists' Newsletter, JCreate Founder
Ivan St. Ivanov	Java Champion, Bulgarian JUG Leader, jPrime Conference Organizer, Virtual JUG Leader, VIDA Software co-founder and senior programmer
Stephen	Java Champion, Creator Joda and ThreeTen projects

Colebourne	
Trisha Gee	Java Champion, Sevilla Java User Group Leader, JCP Executive Committee Member, Java Developer Advocate for JetBrains
Josh Long	Java Champion, Spring Developer Advocate for Pivotal, best-selling book author and prolific speaker worldwide
Gail Anderson	Java Champion, Oracle Developer Champion, co-founder Anderson Software Group, Inc.
Justin Lee	Java Champion, JSR EG Member
Andres Almiray	Java Champion, JCP EC Member, Oracle Developer Champion, Hackergarten worldwide
Enrique Zamudio	Java Champion, JVM MX (Mexico City JUG), author of j8583, jAlarms, Ceylon to Javascript compiler
Alan Williamson	Java Champion, author, podcaster, CTO of MacLaurin Group
Maurice Naftalin	Java Champion, Oracle Developer Champion, author
Mark Heckler	Java Champion, Spring Developer Advocate for Pivotal, conference speaker, & published author
Kirk Pepperdine	Java Champion, jCreate cofounder, Performance tuning advocate, co-founder jClarity
Matt Raible	Java Champion, Web Developer, and Developer Advocate at Okta. Classic VWs Enthusiast.
Henri Tremblay	Java Champion, Montréal JUG & DevOxx4kids Québec leader, EasyMock and Objenesis lead developer, conference speaker
Cay Horstmann	Java Champion, author of "Core Java"
David Heffelfinger	Java Champion, Apache NetBeans Committer, Technical Author, Jakarta EE Consultant and Instructor.
Josh Juneau	Java Champion, Apache NetBeans Committer, Jakarta EE Mojarra Committer, Technical Author, Podcaster
Jonathan Giles	Java Champion, Dukes Choice Award winner, Microsoft Cloud Developer Advocate, Co-founder Gluon
Ben Evans	Java Champion, former JCP EC Member, co-founder jClarity, author of "Java in a Nutshell" & "Optimizing Java"
Johan Vos	Java Champion, Oracle Developer Champion, Gluon co-founder

Thor Henning hetland	Java Champion, Principal at Capra Consulting. Community leader Cantara, javaBin, JavaZone, Oslo Software Architecture and more..
Simone Bordet	Java Champion, JUG Torino co-leader, Jetty team member
Holly Cummins	Java Champion, Author of <i>Enterprise OSGi in Action</i>
Daniel Bryant	Java Champion, co-author of <i>Continuous Delivery in Java</i> , and leader within the LJC
Mohamed Taman	Java Champions, Oracle Developer Champions, JCP member, EGJUG leader, Sr. Enterprise Architect / Sr. Software Engineer @WebCentric Belgrade, Serbia. International speaker, Books Author of "JavaFX essentials", "Getting started with clean code, Java SE 9", and "Hands-On Java 10 Programming with JShell". Won Duke's choice 2015, 2014 awards, & JCP outstanding adopt-a-jar participant 2013 awards
Simon Maple	Java Champion, Oracle Developer Champion, Virtual JUG leader, Director of Developer Relations, Snyk.
Oliver Gierke	Java Champion, Spring Data Project Lead at Pivotal Software, Inc.
Jean-Michel Doudoux	Java Champion, author of " <i>Développons en Java</i> "
Michael Kölling	Java Champion, Creator of BlueJ and Greenfoot, author of 'Objects First with Java'.
Mert Çalışkan	Java Champion, Director of OpsGenie Academy, Published Author, Speaker
Leonardo M R Lima	Java Champion, JSR Spec Lead
Cesar Hernandez	Java Champion, Senior Software Engineer at Tomitribe, Eclipse Foundation Committer, Guatemala Java User Group member, Speaker and board member of Latin America Virtual JUG JEspañol.