



## Red Hat build of OpenJDK 17

### Release notes for Red Hat build of OpenJDK 17.0.4



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## Abstract

This document provides an overview of new features in Red Hat build of OpenJDK 17, and a list of potential known issues and possible workarounds.

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## PREFACE

Open Java Development Kit (OpenJDK) is a free and open source implementation of the Java Platform, Standard Edition (Java SE). The Red Hat build of OpenJDK is available in three versions: 8u, 11u, and 17u.

Packages for the Red Hat build of OpenJDK are made available on Red Hat Enterprise Linux and Microsoft Windows and shipped as a JDK and JRE in the Red Hat Ecosystem Catalog.

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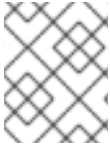
## MAKING OPEN SOURCE MORE INCLUSIVE

Red Hat is committed to replacing problematic language in our code, documentation, and web properties. We are beginning with these four terms: master, slave, blacklist, and whitelist. Because of the enormity of this endeavor, these changes will be implemented gradually over several upcoming releases. For more details, see [our CTO Chris Wright's message](#).

## CHAPTER 1. SUPPORT POLICY FOR RED HAT BUILD OF OPENJDK

Red Hat will support select major versions of Red Hat build of OpenJDK in its products. For consistency, these versions remain similar to Oracle JDK versions that are designated as long-term support (LTS).

A major version of Red Hat build of OpenJDK will be supported for a minimum of six years from the time that version is first introduced. For more information, see the [OpenJDK Life Cycle and Support Policy](#).



### NOTE

RHEL 6 reached the end of life in November 2020. Because of this, Red Hat build of OpenJDK is not supporting RHEL 6 as a supported configuration..

## CHAPTER 2. DIFFERENCES FROM UPSTREAM OPENJDK 17

Red Hat build of OpenJDK in Red Hat Enterprise Linux contains a number of structural changes from the upstream distribution of OpenJDK. The Microsoft Windows version of Red Hat build of OpenJDK attempts to follow Red Hat Enterprise Linux updates as closely as possible.

The following list details the most notable Red Hat build of OpenJDK 17 changes:

- FIPS support. Red Hat build of OpenJDK 17 automatically detects whether RHEL is in FIPS mode and automatically configures Red Hat build of OpenJDK 17 to operate in that mode. This change does not apply to Red Hat build of OpenJDK builds for Microsoft Windows.
- Cryptographic policy support. Red Hat build of OpenJDK 17 obtains the list of enabled cryptographic algorithms and key size constraints from the RHEL system configuration. These configuration components are used by the Transport Layer Security (TLS) encryption protocol, the certificate path validation, and any signed JARs. You can set different security profiles to balance safety and compatibility. This change does not apply to Red Hat build of OpenJDK builds for Microsoft Windows.
- Red Hat build of OpenJDK on RHEL dynamically links against native libraries such as **zlib** for archive format support and **libjpeg-turbo**, **libpng**, and **giflib** for image support. RHEL also dynamically links against **Harfbuzz** and **Freetype** for font rendering and management. This change does not apply to Red Hat build of OpenJDK builds for Microsoft Windows.
- The **src.zip** file includes the source for all of the JAR libraries shipped with Red Hat build of OpenJDK.
- Red Hat build of OpenJDK on RHEL uses system-wide timezone data files as a source for timezone information.
- Red Hat build of OpenJDK on RHEL uses system-wide CA certificates.
- Red Hat build of OpenJDK on Microsoft Windows includes the latest available timezone data from RHEL.
- Red Hat build of OpenJDK on Microsoft Windows uses the latest available CA certificate from RHEL.

### Additional resources

- See, [Improve system FIPS detection \(RHEL Planning Jira\)](#)
- See, [Using system-wide cryptographic policies \(RHEL documentation\)](#)

## CHAPTER 3. RED HAT BUILD OF OPENJDK 17.0.4.1 RELEASE NOTES

Review the following release note to understand changes from the Red Hat build of OpenJDK 17.0.4.1 patch release:

### Fixed issue with the C2 JIT compiler

The Red Hat build of OpenJDK 17.0.4.1 release fixes a regression issue with the C2 Just-In-Time (JIT) compiler, which caused the HotSpot JVM to unexpectedly crash.

See, [JDK-8292396 \(JDK Bug System\)](#)

### Advisories related to the Red Hat build of OpenJDK 17.0.4.1 release

The following advisories have been issued to bug fixes and CVE fixes included in this release:

- [RHBA-2022:6293-01](#)
- [RHBA-2022:6350-02](#)

## CHAPTER 4. RED HAT BUILD OF OPENJDK FEATURES

The latest Red Hat build of OpenJDK 17 release might include new features. Additionally, the latest release might enhance, deprecate, or remove features that originated from previous Red Hat build of OpenJDK 17 releases.



### NOTE

For all the other changes and security fixes, see [OpenJDK 17.0.4 Released](#).

### 4.1. RED HAT BUILD OF OPENJDK ENHANCEMENTS

Red Hat build of OpenJDK 17 provides enhancements to features originally created in previous releases of Red Hat build of OpenJDK.

#### HTTPS channel binding support for Java Generic Security Services (GSS) or Kerberos

The Red Hat build of OpenJDK 17.0.4 release supports TLS channel binding tokens when Negotiate selects Kerberos authentication over HTTPS through **`javax.net.HttpsURLConnection`**.

Channel binding tokens are increasingly required as an enhanced form of security which can mitigate certain kinds of socially engineered, man in the middle (MITM) attacks. They work by communicating from a client to a server the client's understanding of the binding between connection security (as represented by a TLS server cert) and higher level authentication credentials (such as a username and password). The server can then detect if the client has been fooled by a MITM and shutdown the session/connection.

The feature is controlled through the **`jdk.https.negotiate.cbt`** system property, which is described fully in [Oracle documentation](#).

See, [JDK-8285240 \(JDK Bug System\)](#)

#### Incorrect handling of quoted arguments in ProcessBuilder

Before the Red Hat build of OpenJDK 17.0.4 release, arguments to **`ProcessBuilder`** on Windows that started with a double quotation mark and ended with a backslash followed by a double quotation mark passed to a command incorrectly, causing the command to fail. For example, the argument **`"C:\Program Files\"`**, was processed as having extra double quotation marks at the end.

The Red Hat build of OpenJDK 17.0.4 release resolves this issue by restoring the previously available behavior, in which the backslash (`\`) before the final double quotation mark is not treated specially.

See, [JDK-8283137 \(JDK Bug System\)](#)

#### Default JDK compressor closes when IOException is encountered

The **`DeflaterOutputStream.close()`** and **`GZIPOutputStream.finish()`** methods have been modified to close out the associated default JDK compressor before propagating a **`Throwable`** up the stack. The **`ZIPOutputStream.closeEntry()`** method has been modified to close out the associated default JDK compressor before propagating an **`IOException`**, not of type **`ZipException`**, up the stack.

See, [JDK-8278386 \(JDK Bug System\)](#)

#### New system property to disable Windows Alternate Data Stream support in `java.io.File`

The Windows implementation of **`java.io.File`** allows access to NTFS Alternate Data Streams (ADS) by

default. These streams are structured in the format "filename:streamname". The Red Hat build of OpenJDK 17.0.4 release adds a system property that allows you to disable ADS support in **java.io.File**. To disable ADS support in **java.io.File**, set the system property **jdk.io.File.enableADS** to **false**.



### IMPORTANT

Disabling ADS support in **java.io.File** results in stricter path checking that prevents the use of special device files, such as **NUL:**.

See, [JDK-8285660 \(JDK Bug System\)](#)

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