



OpenJDK 17

Release notes for OpenJDK 17.0.3

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Abstract

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

Table of Contents

PREFACE	3
MAKING OPEN SOURCE MORE INCLUSIVE	4
PROVIDING FEEDBACK ON RED HAT DOCUMENTATION	5
CHAPTER 1. SUPPORT POLICY FOR OPENJDK	6
CHAPTER 2. DIFFERENCES FROM UPSTREAM OPENJDK 17	7
CHAPTER 3. OPENJDK FEATURES	8
3.1. OPENJDK ENHANCEMENTS	8
OCSP response verification with RSASSA-PSS	8
Alternative Data Streams (ADS) behavior on OpenJDK for Microsoft Windows	8
CHAPTER 4. KNOWN ISSUES	9
XPath expressions	9
CHAPTER 5. ADVISORIES RELATED TO THIS RELEASE	10

PREFACE

OpenJDK (Open Java Development Kit) 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: OpenJDK 8u, OpenJDK 11u, and OpenJDK 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.

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](#).

PROVIDING FEEDBACK ON RED HAT DOCUMENTATION

We appreciate your feedback on our documentation. To provide feedback, you can highlight the text in a document and add comments.

This section explains how to submit feedback.

Prerequisites

- You are logged in to the Red Hat Customer Portal.
- In the Red Hat Customer Portal, view the document in **Multi-page HTML** format.

Procedure

To provide your feedback, perform the following steps:

1. Click the **Feedback** button in the top-right corner of the document to see existing feedback.



NOTE

The feedback feature is enabled only in the **Multi-page HTML** format.

2. Highlight the section of the document where you want to provide feedback.
3. Click the **Add Feedback** pop-up that appears near the highlighted text.
A text box appears in the feedback section on the right side of the page.
4. Enter your feedback in the text box and click **Submit**.
A documentation issue is created.
5. To view the issue, click the issue tracker link in the feedback view.

CHAPTER 1. SUPPORT POLICY FOR OPENJDK

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

Red Hat supports a major version of OpenJDK for a minimum of six years from the time Red Hat first introduces OpenJDK.

OpenJDK 17 is supported on Microsoft Windows and Red Hat Enterprise Linux until November 2027.



NOTE

RHEL 6 has reached the end of life in November 2020. OpenJDK 17 is not supported on RHEL 6.

Additional resources

See, [OpenJDK Life Cycle and Support Policy \(Red Hat Customer Portal\)](#)

CHAPTER 2. DIFFERENCES FROM UPSTREAM OPENJDK 17

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

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

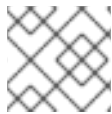
- FIPS support. Red Hat OpenJDK 17 automatically detects whether RHEL is in FIPS mode and automatically configures OpenJDK 17 to operate in that mode. This change does not apply to OpenJDK builds for Microsoft Windows.
- Cryptographic policy support. Red Hat OpenJDK 17 obtains the list of enabled cryptographic 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 OpenJDK builds for Microsoft Windows.
- Red Hat 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 OpenJDK builds for Microsoft Windows.
- The **src.zip** file includes the source for all of the JAR libraries shipped with OpenJDK.
- Red Hat OpenJDK on RHEL uses system-wide timezone data files as a source for timezone information.
- Red Hat OpenJDK on RHEL uses system-wide CA certificates.
- Red Hat OpenJDK on Microsoft Windows includes the latest available timezone data from RHEL.
- Red Hat 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. OPENJDK FEATURES

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



NOTE

For all the other changes and security fixes, see [OpenJDK 17.0.3 Released](#).

3.1. OPENJDK ENHANCEMENTS

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

OCSP response verification with RSASSA-PSS

Before the OpenJDK 17.0.3 release, verification of the Online Certificate Status Protocol (OCSP) response by the RSASSA-PSS algorithm failed. This issue occurred because the HTTP GET helper method did not set extra parameters for an RSASSA-PSS signature.

The OpenJDK 17.0.3 resolves this issue, so that an OCSP response that is sent by the HTTP GET method can be verified by the RSASSA-PSS algorithm.

See, [JDK-8179503 \(JDK Bug System\)](#)

Alternative Data Streams (ADS) behavior on OpenJDK for Microsoft Windows

This OpenJDK 17 for Microsoft Windows release fixes an issue where some Java applications failed because `java.io.FileOutputStream` would not open some files containing a colon (`:`) character. This issue occurred because the default value for `jdk.io.File.enableADS` was set to `false`.

This OpenJDK 17 for Microsoft Windows release sets the default value for the `jdk.io.File.enableADS` to `true`. By default, OpenJDK can now write to Alternative Data Streams and to special files in Microsoft Windows, such as the `NUL:` file.

You can disable OpenJDK's capability to write to ADS by choosing one of the following options:

- Pass the `-Djdk.io.File.enableADS=false` parameter to your OpenJDK deployment.
- Set the `JAVA_TOOL_OPTIONS` environment variable to `JAVA_TOOL_OPTIONS=-Djdk.io.File.enableADS=false`.



IMPORTANT

Implementing one of these settings might cause issues with how your Java applications write data into files for your OpenJDK 17 for Microsoft Windows build.

See, [JDK-8285445 \(JDK Bug System\)](#)

CHAPTER 4. KNOWN ISSUES

OpenJDK 17 might include known issues. Solutions might exist for some of these known issues.

XPath expressions

OpenJDK 17 specifies new default limits for **XPath** expressions. If you find that your code is exceeding these limits, you can raise them by passing the following parameters to your OpenJDK deployment or by setting the **JAVA_TOOL_OPTIONS** environment variable to use them:

- `-Djdk.xml.xpathExprGrpLimit`, which defaults to 10
- `-Djdk.xml.xpathExprOpLimit`, which defaults to 100
- `-Djdk.xml.xpathTotalOpLimit`, which defaults to 10,000

These default limits restrict the number of expression groups, the number of operators in a single expression, and the total number of operators.

CHAPTER 5. ADVISORIES RELATED TO THIS RELEASE

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

- [RHSA-2022:1436](#)
- [RHSA-2022:1437](#)
- [RHSA-2022:1445](#)
- [RHBA-2022:1447](#)

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