Red Hat build of OpenJDK 11

Release notes for Red Hat build of OpenJDK 11.0.19

Last Updated: 2023-11-02

Red Hat build of OpenJDK 11 Release notes for Red Hat build of OpenJDK 11.0.19

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Abstract

The Release notes for Red Hat build of OpenJDK 11.0.19 document provides an overview of new features in Red Hat build of OpenJDK 11 and a list of potential known issues and possible workarounds.

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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: 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.

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

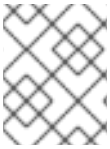
The feedback feature is enabled only in the **Multi-page HTML** format.

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 RED HAT BUILD OF OPENJDK

Red Hat will support select major versions of Red Hat build of OpenJDK in its products. For consistency, these are the same versions that Oracle designates as long-term support (LTS) for the Oracle JDK.

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 11

Red Hat build of OpenJDK in Red Hat Enterprise Linux (RHEL) 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 RHEL updates as closely as possible.

The following list details the most notable Red Hat build of OpenJDK 11 changes:

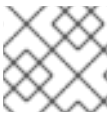
- FIPS support. Red Hat build of OpenJDK 11 automatically detects whether RHEL is in FIPS mode and automatically configures Red Hat build of OpenJDK 11 to operate in that mode. This change does not apply to Red Hat build of OpenJDK builds for Microsoft Windows.
- Cryptographic policy support. Red Hat build of OpenJDK 11 obtains the list of enabled cryptographic algorithms and key size constraints from RHEL. 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.
- The **src.zip** file includes the source for all 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

- For more information about detecting if a system is in FIPS mode, see the Improve system FIPS detection example on the Red Hat RHEL Planning Jira.
- For more information about cryptographic policies, see Using system-wide cryptographic policies.

CHAPTER 3. RED HAT BUILD OF OPENJDK FEATURES

The latest Red Hat build of OpenJDK 11 release might include new features. Additionally, the latest release might enhance, deprecate, or remove features that originated from previous Red Hat build of OpenJDK 11 releases.



NOTE

For all the other changes and security fixes, see OpenJDK 11.0.19 Released.

Red Hat build of OpenJDK new features and enhancements

Review the following release notes to understand new features and feature enhancements that are included with the Red Hat build of OpenJDK 11.0.19 release:

SSLv2Hello and SSLv3 protocols removed from default-enabled TLS protocols

SSLv2Hello and SSLv3 are versions of the SSL protocol that are disabled by default, because they have not been considered secure for some time. The SSLv2Hello and SSLv3 protocols are superseded by the more secure and modern TLS protocol and users can switch to TLS versions 1.2 or 1.3.

With release Red Hat build of OpenJDK 11.0.19, the list of default-enabled protocols no longer includes SSLv2Hello and SSLv3. Therefore, even if you remove SSLv3 from the **jdk.tls.disabledAlgorithms** security property, the following methods will no longer return SSLv3:

- **SSLServerSocket.getEnabledProtocols()**
- **SSLEngine.getEnabledProtocols()**
- **SSLParameters.getProtocols()**

Now, if you want to enable SSLv3, you must use the **jdk.tls.client.protocols** or **jdk.tls.server.protocols** system properties on the command line, or call one of the following methods to enable SSLv3 programmatically:

- **SSLSocket.setEnabledProtocols()**
- **SSLServerSocket.setEnabledProtocols()**
- **SSLEngine.setEnabledProtocols()**

See JDK-8190492 (JDK Bug System).

Certigna (Dhimyotis) root certificate authority (CA) certificate added

In release Red Hat build of OpenJDK 11.0.19, the **cacerts** truststore includes the Certigna (Dhimyotis) root certificate:

- Name: Certigna (Dhimyotis)
- Alias name: certignarootca
- Distinguished name: CN=Certigna, O=Dhimyotis, C=FR

See JDK-8245654 (JDK Bug System).

listRoots method returns all available drives on Windows

In previous releases, the **java.io.File.listRoots()** method on Windows systems filtered out any disk drives that were not accessible or did not have media loaded. However, this filtering led to observable performance issues.

Now, with release Red Hat build of OpenJDK 11.0.19, the **listRoots** method returns all available disk drives unfiltered.

See JDK-8208077 (JDK Bug System).

Enhanced Swing platform support

In earlier releases of Red Hat build of OpenJDK, HTML object tags rendered embedded in Swing HTML components. With release Red Hat build of OpenJDK 11.0.19, rendering only occurs if you set the new system property **swing.html.object** to true. By default, the **swing.html.object property** is set to false.

JDK bug system reference ID: JDK-8296832.

CHAPTER 4. ADVISORIES RELATED TO THIS RELEASE

The following advisories are issued to document bug fixes and CVE fixes included in this release:

- RHSA-2023:1875
- RHSA-2023:1877
- RHSA-2023:1878
- RHSA-2023:1880
- RHSA-2023:1882
- RHSA-2023:1883
- RHSA-2023:1889
- RHSA-2023:1892
- RHSA-2023:1895
- RHSA-2023:1899

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