Red Hat build of OpenJDK 17

Release notes for Red Hat build of OpenJDK 17.0.7

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Red Hat build of OpenJDK 17 Release notes for Red Hat build of OpenJDK 17.0.7

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Abstract

The Release notes for Red Hat build of OpenJDK 17.0.7 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.

PROVIDING FEEDBACK ON RED HAT BUILD OF OPENJDK DOCUMENTATION

To report an error or to improve our documentation, log in to your Red Hat Jira account and submit an issue. If you do not have a Red Hat Jira account, then you will be prompted to create an account.

Procedure

1. Click the following link to **create a ticket**.
2. Enter a brief description of the issue in the **Summary**.
3. Provide a detailed description of the issue or enhancement in the **Description**. Include a URL to where the issue occurs in the documentation.
4. Clicking **Submit** creates and routes the issue to the appropriate documentation team.

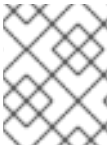
MAKING OPEN SOURCE MORE INCLUSIVE

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:

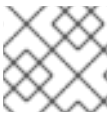
- FIPS support. Red Hat build of OpenJDK 17 automatically detects whether RHEL is in FIPS mode and automatically configures Red Hat build of OpenJDK 17 to operate in that mode. This change does not apply to Red Hat build of OpenJDK builds for Microsoft Windows.
- Cryptographic policy support. Red Hat 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 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 17.0.7 Released.

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.

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

In release Red Hat build of OpenJDK 17.0.7, 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).

New Java Flight Recorder (JFR) event jdk.InitialSecurityProperty

With Red Hat build of OpenJDK 17.0.7, the initial security properties that the **java.security.Security** class loads are now accessible in the new JFR event, **jdk.InitialSecurityProperty**.

The **jdk.InitialSecurityProperty** event contains the following two fields:

- Key: The security property key.
- Value: The corresponding security property value.

By using this new event and the existing **jdk.SecurityPropertyModification** event, you can now monitor security properties throughout their lifecycle.

In this release, you can also print initial security properties to the standard error output stream when the **-Djava.security.debug=properties** property is passed to the Java virtual machine.

See JDK-8292177 (JDK Bug System).

Error thrown if java.security file fails to load

In previous releases, if Red Hat build of OpenJDK could not load the **java.security** file, a hard-coded set of security properties was used. This set of properties was not fully maintained and it was unclear to the user when they were being used.

Now, with Red Hat build of OpenJDK 17.0.7, if Red Hat build of OpenJDK cannot load the **java.security** file, Red Hat build of OpenJDK displays an **InternalError** error message.

See JDK-8155246 (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.

With release Red Hat build of OpenJDK 17.0.7, 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 17.0.7, 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-2023:1822
- RHSA-2023:1879
- RHSA-2023:1884
- RHSA-2023:1885
- RHSA-2023:1890
- RHSA-2023:1891
- RHSA-2023:1898
- RHSA-2023:1900

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