Red Hat build of OpenJDK 17

Release notes for Red Hat build of OpenJDK 17.0.10

Last Updated: 2024-05-03

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Legal Notice

Abstract

The Release notes for Red Hat build of OpenJDK 17.0.10 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 four versions: 8u, 11u, 17u, and 21u.

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.

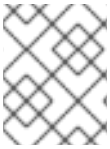
MAKING OPEN SOURCE MORE INCLUSIVE

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:

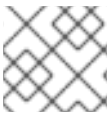
- FIPS support. Red Hat build of OpenJDK 17 automatically detects whether RHEL is in FIPS mode and automatically configures Red Hat build of OpenJDK 17 to operate in that mode. This change does not apply to Red Hat build of OpenJDK builds for Microsoft Windows.
- Cryptographic policy support. Red Hat 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 17.0.10 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.

KEEPALIVE extended socket options support added on Windows

On Windows 10 version 1709 or later platforms, the **java.net.ExtendedSocketOptions** class now supports the **TCP_KEEPIDLE** and **TCP_KEEPINTERVAL** options.

Similarly, on Windows 10 version 1703 or later platforms, the **java.net.ExtendedSocketOptions** class now supports the **TCP_KEEPCOUNT** option.

See JDK-8308593 (JDK Bug System).

X509KeyManager.chooseClientAlias method called once for all key types

In Red Hat build of OpenJDK 17.0.10, TLS or Datagram TLS (DTLS) now makes only one call to the **X509KeyManager.chooseClientAlias** method during handshakes for client authentication, regardless of how many algorithms are requested.

See JDK-8262186 (JDK Bug System).

Peak values for committed memory included in NMT reports

In Red Hat build of OpenJDK 17.0.10, Native Memory Tracking (NMT) reports now show the peak value for all categories. The peak value is the highest value for committed memory in a given NMT category over the lifetime of the JVM process.

If the committed memory for a category is currently at its highest value, the NMT report shows an **at peak** value; otherwise, the NMT report shows the historic peak value.

For example, the following report output shows that compiler arena memory peaked above 6 MB but is now approximately 200KB:

```
Compiler (arena=196KB #4) (peak=6126KB #16)
```

See JDK-8317772 (JDK Bug System).

JVM warnings about unsupported THPs on Red Hat Enterprise Linux

On Red Hat Enterprise Linux platforms, if Transparent Huge Pages (THPs) are requested but not supported, the JVM now prints the following message to standard output:

```
UseTransparentHugePages disabled; transparent huge pages are not supported by the operating system.
```

See JDK-8313782 (JDK Bug System).

Increased default value of jdk.jar.maxSignatureFileSize system property

Red Hat build of OpenJDK 17.0.8 introduced a **jdk.jar.maxSignatureFileSize** system property for configuring the maximum number of bytes that are allowed for the signature-related files in a Java archive (JAR) file (JDK-8300596). By default, the **jdk.jar.maxSignatureFileSize** property was set to 8000000 bytes (8 MB), which was too small for some JAR files, such as the Mend (formerly WhiteSource) Unified Agent JAR file.

Red Hat build of OpenJDK 17.0.10 increases the default value of the **jdk.jar.maxSignatureFileSize** property to 16000000 bytes (16 MB).

See JDK-8312489 (JDK Bug System)

Let's Encrypt ISRG Root X2 CA certificate added

In Red Hat build of OpenJDK 17.0.10, the **cacerts** truststore includes the Internet Security Research Group (ISRG) Root X2 certificate authority (CA) certificate from Let's Encrypt:

- Name: Let's Encrypt
- Alias name: letsencryptisrgx2
- Distinguished name: CN=ISRG Root X2, O=Internet Security Research Group, C=US

See JDK-8317374 (JDK Bug System).

Digicert, Inc. root certificates added

In Red Hat build of OpenJDK 17.0.10, the **cacerts** truststore includes four Digicert, Inc. root certificates:

Certificate 1

- Name: DigiCert, Inc.
- Alias name: digicertcseccrootg5
- Distinguished name: CN=DigiCert CS ECC P384 Root G5, O="DigiCert, Inc.", C=US

Certificate 2

- Name: DigiCert, Inc.
- Alias name: digicertcsrsarootg5
- Distinguished name: CN=DigiCert CS RSA4096 Root G5, O="DigiCert, Inc.", C=US

Certificate 3

- Name: DigiCert, Inc.
- Alias name: digicerttlseccrootg5
- Distinguished name: CN=DigiCert TLS ECC P384 Root G5, O="DigiCert, Inc.", C=US

Certificate 4

- Name: DigiCert, Inc.
- Alias name: digicerttlsrsarootg5

- Distinguished name: CN=DigiCert TLS RSA4096 Root G5, O="DigiCert, Inc.", C=US

See JDK-8318759 (JDK Bug System).

eMudhra Technologies Limited root certificates added

In Red Hat build of OpenJDK 17.0.10, the **cacerts** truststore includes three eMudhra Technologies Limited root certificates:

Certificate 1

- Name: eMudhra Technologies Limited
- Alias name: emsignrootcag1
- Distinguished name: CN=emSign Root CA - G1, O=eMudhra Technologies Limited, OU=emSign PKI, C=IN

Certificate 2

- Name: eMudhra Technologies Limited
- Alias name: emsigneccrootcag3
- Distinguished name: CN=emSign ECC Root CA - G3, O=eMudhra Technologies Limited, OU=emSign PKI, C=IN

Certificate 3

- Name: eMudhra Technologies Limited
- Alias name: emsignrootcag2
- Distinguished name: CN=emSign Root CA - G2, O=eMudhra Technologies Limited, OU=emSign PKI, C=IN

See JDK-8319187 (JDK Bug System).

Telia Root CA v2 certificate added

In Red Hat build of OpenJDK 17.0.10, the **cacerts** truststore includes the Telia Root CA v2 certificate:

- Name: Telia Root CA v2
- Alias name: teliarootcav2
- Distinguished name: CN=Telia Root CA v2, O=Telia Finland Oyj, C=FI

See JDK-8317373 (JDK Bug System).

CHAPTER 4. ADVISORIES RELATED TO THIS RELEASE

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

- RHSA-2024:0240
- RHSA-2024:0241
- RHSA-2024:0242
- RHSA-2024:0244
- RHSA-2024:0246
- RHSA-2024:0267

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