Red Hat build of OpenJDK 11

Release notes for Red Hat build of OpenJDK 11.0.22

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Red Hat build of OpenJDK 11 Release notes for Red Hat build of OpenJDK 11.0.22

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Abstract

The Release notes for Red Hat build of OpenJDK 11.0.22 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

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.

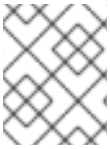
MAKING OPEN SOURCE MORE INCLUSIVE

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 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:

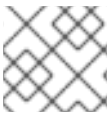
- FIPS support. Red Hat build of OpenJDK 11 automatically detects whether RHEL is in FIPS mode and automatically configures Red Hat build of OpenJDK 11 to operate in that mode. This change does not apply to Red Hat build of OpenJDK builds for Microsoft Windows.
- Cryptographic policy support. Red Hat 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 11.0.22 Released.

Red Hat build of OpenJDK new features and enhancements

Review the following release notes to understand new features and feature enhancements that Red Hat build of OpenJDK 11.0.22 provides:

New JFR event jdk.SecurityProviderService

Calls to the **java.security.Provider.getService(String type, String algorithm)** method now trigger a new JFR event, **jdk.SecurityProviderService**.

The **jdk.SecurityProviderService** event contains the following three fields:

- Type: The type of service
- Algorithm: The algorithm name
- Provider: The security provider

The **jdk.SecurityProviderService** event is disabled by default. You can enable this event by using the standard JFR configuration files and options.

See JDK-8254711 (JDK Bug System).

Increased default value of jdk.jar.maxSignatureFileSize system property

Red Hat build of OpenJDK 11.0.20 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 11.0.22 increases the default value of the **jdk.jar.maxSignatureFileSize** property to 16000000 bytes (16 MB).

See JDK-8312489 (JDK Bug System)

Telia Root CA v2 certificate added

In Red Hat build of OpenJDK 11.0.22, the **cacerts** truststore includes the Telia Root certificate authority (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).

Let's Encrypt ISRG Root X2 CA certificate added

In Red Hat build of OpenJDK 11.0.22, the **cacerts** truststore includes the Internet Security Research Group (ISRG) Root X2 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 11.0.22, 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 11.0.22, 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).

CHAPTER 4. ADVISORIES RELATED TO THIS RELEASE

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

- RHSA-2024:0231
- RHSA-2024:0232
- RHSA-2024:0233
- RHSA-2024:0234
- RHSA-2024:0235
- RHSA-2024:0237
- RHSA-2024:0239
- RHSA-2024:0266

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