Red Hat build of OpenJDK 11

Release notes for Eclipse Temurin 11.0.23

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Legal Notice

Abstract

The release notes for Eclipse Temurin 11.0.23 provide an overview of new features in 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). Eclipse Temurin is available in four LTS versions: OpenJDK 8u, OpenJDK 11u, OpenJDK 17u, and OpenJDK 21u.

Binary files for Eclipse Temurin are available for macOS, Microsoft Windows, and multiple Linux x86 Operating Systems including Red Hat Enterprise Linux and Ubuntu.

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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.

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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 ECLIPSE TEMURIN

Red Hat will support select major versions of Eclipse Temurin 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 Eclipse Temurin will be supported for a minimum of six years from the time that version is first introduced. For more information, see the Eclipse Temurin Life Cycle and Support Policy .

NOTE

RHEL 6 reached the end of life in November 2020. Because of this, Eclipse Temurin does not support RHEL 6 as a supported configuration.

CHAPTER 2. ECLIPSE TEMURIN FEATURES

Eclipse Temurin does not contain structural changes from the upstream distribution of OpenJDK.

For the list of changes and security fixes that the latest OpenJDK 11 release of Eclipse Temurin includes, see OpenJDK 11.0.23 Released.

New features and enhancements

Review the following release notes to understand new features and feature enhancements included with the Eclipse Temurin 11.0.23 release:

XML Signature secure validation mode enabled by default

In OpenJDK 11.0.23, XML Signature secure validation mode is enabled by default. To control restrictions and constraints for secure validation mode, you can use the **jdk.xml.dsig.secureValidationPolicy** system property.

If you want to disable secure validation mode, ensure that the **org.jcp.xml.dsig.secureValidation** property is set to **Boolean.FALSE** by using the **DOMValidateContext.setProperty()** API. Before you disable secure validation mode, ensure that you consider any associated security risks.

See JDK-8259801 (JDK Bug System).

XML Security for Java updated to Apache Santuario 3.0.3

In OpenJDK 11.0.23, the XML signature implementation is based on Apache Santuario 3.0.3.

This enhancement introduces the following four SHA-3-based RSA-MGF1 **SignatureMethod** algorithms:

- **SHA3_224_RSA_MGF1**
- **SHA3_256_RSA_MGF1**
- **SHA3_384_RSA_MGF1**
- **SHA3_512_RSA_MGF1**

Because the **javax.xml.crypto.dsig.SignatureMethod** API cannot be modified in update releases to provide constant values for the new algorithms, use the following equivalent string literal values for these algorithms:

- **http://www.w3.org/2007/05/xmldsig-more#sha3-224-rsa-MGF1**
- **http://www.w3.org/2007/05/xmldsig-more#sha3-256-rsa-MGF1**
- **http://www.w3.org/2007/05/xmldsig-more#sha3-384-rsa-MGF1**
- **http://www.w3.org/2007/05/xmldsig-more#sha3-512-rsa-MGF1**

This enhancement also introduces support for the **ED25519** and **ED448** elliptic curve algorithms, which are both Edwards-curve Digital Signature Algorithm (EdDSA) signature schemes.

NOTE

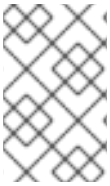
In contrast to the upstream community version of Apache Santuario 3.0.3, the JDK still supports the **here()** function. However, future support for the **here()** function is not guaranteed. You should avoid using **here()** in new XML signatures. You should also update any XML signatures that currently use **here()** to stop using this function. The **here()** function is enabled by default. To disable the **here()** function, ensure that the **jdk.xml.dsig.hereFunctionSupported** system property is set to **false**.

See JDK-8319124 (JDK Bug System).

SystemTray.isSupported() method returns false on most Linux desktops

In OpenJDK 11.0.23, the **java.awt.SystemTray.isSupported()** method returns **false** on systems that do not support the **SystemTray** API correctly. This enhancement is in accordance with the **SystemTray** API specification.

The **SystemTray** API is used to interact with the taskbar in the system desktop to provide notifications. **SystemTray** might also include an icon representing an application. Due to an underlying platform issue, GNOME desktop support for taskbar icons has not worked correctly for several years. This platform issue affects the JDK's ability to provide **SystemTray** support on GNOME desktops. This issue typically affects systems that use GNOME Shell 44 or earlier.



NOTE

Because the lack of correct **SystemTray** support is a long-standing issue on some systems, this API enhancement to return **false** on affected systems is likely to have a minimal impact on users.

See JDK-8322750 (JDK Bug System).

Certainly R1 and E1 root certificates added

In OpenJDK 11.0.23, the **cacerts** truststore includes two Certainly root certificates:

Certificate 1

- Name: Certainly
- Alias name: certainlyrootr1
- Distinguished name: CN=Certainly Root R1, O=Certainly, C=US

Certificate 2

- Name: Certainly
- Alias name: certainlyroote1
- Distinguished name: CN=Certainly Root E1, O=Certainly, C=US

See JDK-8321408 (JDK Bug System).

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