



Azul Zulu builds of OpenJDK

April 2022 Quarterly Update

Release Notes

Revision 1.8

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Revision History

Revision	Date	Description
0.1	April 19, 2022	Initial version of the document.
1.0	April 19, 2022	Added information about the CVEs fixed in this release.
1.1	April 19, 2022	Added information about the New XML Processing Limits.
1.2	April 19, 2022	Expand information about the new XML Processing Limits.
1.3	April 21, 2022	Removed Java 18 for CVE-2022-21476 affected versions list.
1.4	April 22, 2022	Added 18 to debian and rpm-based-linux install pages.
1.5	April 22, 2022	Regenerated TPLs for Zulu 11, 13, 15, 17.
1.6	April 25, 2022	Added "Note 2" related to the CVE-2018-25032 to the CVE table.
1.7	April 25, 2022	A minor cosmetic change.
1.8	April 29, 2022	Added JDK-8280373 and JDK-8273655; updated the link for ZULU-35911; removed ZULU-33080 and ZULU-31587.

Release Details

Release Date: April 19, 2022

This release is a quarterly update release for Azul Zulu Builds of OpenJDK version 17, 15, 13, 11, 8, 7, and 6. The following table lists detailed information on the Azul Zulu versions released with the current update.

Azul Zulu Version*	Update Type**	JDK Version	Based on		JavaFX Version
			Azul Zulu Version	JDK Version	
18.30.11 (CA) 18.30.12 (SA)	PSU	18.0.1+10	18.28	18+37	18.0.1+100
17.33.16 (SA)	CPU	17.0.2.0.101+1	17.32	17.0.2+8	17.0.2.0.101+100
17.34.19 (CA) 17.34.20 (SA)	PSU	17.0.3+7	17.33	17.0.2.0.101+1	18.0.1+100
15.39.16 (SA)	CPU	15.0.6.0.101+3	15.38	15.0.6+5	17.0.2.0.101+100
15.40.19 (CA) 15.40.20 (SA)	PSU	15.0.7+4	15.39	15.0.6.0.101+3	18.0.1+100
13.47.16 (SA)	CPU	13.0.10.0.101+3	13.46	13.0.10+5	17.0.2.0.101+100
13.48.19 (CA) 13.48.20 (SA)	PSU	13.0.11+4	13.47	13.0.10.0.101+3	18.0.1+100
11.55.18 (SA)	CPU	11.0.14.1.101+4	11.54	11.0.14.1+1	17.0.2.0.101+100
11.56.19 (CA) 11.56.20 (SA)	PSU	11.0.15+10	11.55	11.0.14.1.101+4	18.0.1+100
8.61.0.18 (SA)	CPU	8u331-b04	8.60	8u322-b06	8u331-b01
8.62.0.19 (CA) 8.62.0.20 (SA)	PSU	8u332-b09	8.61	8u331-b04	8u332-b02
7.53.0.16 (SA)	CPU	7u341-b03	7.52	7u332-b01	N/A
7.54.0.13 (CA) 7.54.0.14 (SA)	PSU	7u342-b01	7.53	7u341-b03	N/A

6.47 (SA)	CPU	6b147	6.45	6b145	N/A
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* Azul provides three types of distribution packages for each Java version:

- **SA** distributions are tested, certified, and commercially supported Azul Zulu builds of OpenJDK. Azul ensures that the software that uses the Accessible APIs of the product does not have to include specific licenses and that such use does not contaminate the code or intellectual property of such software with any license requirements.
- **NV** are tested, certified, and commercially supported Azul Zulu builds of OpenJDK.
- **CA** are Azul Zulu builds of OpenJDK that are free to download and use.

** Update type:

- **CPU** (Critical Patch Updates) contain fixes to security vulnerabilities and critical bug fixes. Azul Zulu CPU releases are generally based on prior-cycle PSU releases, with only security fixes applied. They provide a low-risk vehicle for the potentially urgent deployment of security fixes when issues of sufficient severity arise. CPU releases are available in SA and NV distributions.
- **PSU** (Patch Set Updates) incorporates all fixes in the corresponding CPU, as well as additional non-security bug fixes. Azul Zulu PSU releases incorporate both security fixes and other changes that align the release contents with the associated OpenJDK project quarterly release. PSU releases are available in SA, NV, and CA distributions.

Supported Platforms

This section provides information about the operating systems that are supported in this update release of Azul Zulu.

Operating System	Azul Zulu Version							
	6	7	8	11	13	15	17	18
Windows (x86 32/64-bit)								
Windows Server 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows Server 2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows Server 2016	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows Server 2012 R2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows 11	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows 10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows 8.1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows (ARM 64-bit)								
Windows 11	n/a	n/a	n/a	n/a	n/a	n/a	Yes	Yes
Windows 10	n/a	n/a	n/a	n/a	n/a	n/a	Yes	n/a
Linux (x86 32/64-bit)								
RHEL 8.x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RHEL 7.x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SLES 15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SLES 12	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CentOS 8.x [1]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ubuntu 20.04	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ubuntu 18.04	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Debian 11	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Debian 10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Debian 9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wind River 8.x	n/a	Yes	Yes	n/a	n/a	n/a	n/a	n/a
CoreOS	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Alpine Linux 3.11 or later	n/a	n/a	Yes	Yes	Yes	Yes	Yes	Yes
CentOS Stream	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Linux (ARM 64-bit)								
Ubuntu 20.04	n/a	n/a	Yes	Yes	Yes	Yes	Yes	Yes
Ubuntu 18.04	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Alpine Linux 3.11 or later	n/a	n/a	Yes	Yes	n/a	n/a	Yes	Yes
Linux with kernel 3.10.x and glibc 2.23	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux (ARM 32-bit Hard-Float)								
Ubuntu 18.04 [2]	n/a	n/a	Yes	Yes	n/a	n/a	Yes	n/a
Raspbian 10 Buster [2]	n/a	n/a	Yes	Yes	n/a	n/a	Yes	n/a
Raspbian 9 Stretch [2]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux with kernel 3.10.x and glibc 2.9 [2]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux (ARM 32-bit Soft-Float) [3]								
Linux with kernel 2.6.34 and glibc 2.5 [4]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Debian 7 Wheezy [5]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux with kernel 3.10.x and glibc 2.9 [5]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux (MIPS 32-bit) [6]								
Linux with kernel 4.9.59 and glibc 2.9 [7]	n/a	n/a	Yes	n/a	n/a	n/a	n/a	n/a

Linux (PowerPC 64-bit Big Endian)								
Linux with kernel 3.8.13 and glibc 2.22 [8]	n/a	n/a	Yes	n/a	n/a	n/a	n/a	n/a
Linux (PowerPC 32-bit Hard-float and SPE)								
Linux with kernel 3.12.37 and glibc 2.20 [9]	n/a	n/a	Yes	n/a	n/a	n/a	n/a	n/a
QNX (ARMv7 32-bit Hard-Float ABI)								
QNX 7.0	n/a	n/a	Yes	n/a	n/a	n/a	n/a	n/a
MacOS (x86 64-bit)								
macOS 12	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
macOS 11	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MacOS (Apple Silicon)								
macOS 12	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
macOS 11	n/a	n/a	Yes	Yes	Yes	Yes	Yes	Yes
Solaris (x86 and Sparc)								
Solaris 11	Yes	Yes	Yes	Yes	n/a	n/a	n/a	n/a
Solaris 10	Yes	Yes	Yes	n/a	n/a	n/a	n/a	n/a

1. The Azul Zulu builds for CentOS 8 are discontinued in July, 2022 due to Red Hat terminating CentOS development and shifting focus to CentOS Stream.
2. Bundles with the C1 compiler were tested on ARMv6/ARMv7/ARMv8 hardware. Bundles with both C1 and C2 compilers were tested on ARMv7/ARMv8 hardware.
3. Bundles with the C1 compiler use FPU, if it is present and available, to speed up floating point operations. Bundles with both C1 and C2 compilers require FPU.
4. Bundles with the C1 compiler. Tested on ARMv5 hardware.
5. Bundles with the C1 compiler were tested on ARMv6 and ARMv7 hardware. Bundles with both C1 and C2 compilers were tested on ARMv7 hardware.
6. MIPS32r2 ISA, Big Endian, FPU in 32-bit mode or equivalent emulation.
7. Linux soft-float O32 MIPS ABI

8. Bundles for this platform were tested on QorIQ® T4240-RDB.
9. Hard-Float EABI bundles were tested on QorIQ® T1024RDB. SPE ABI bundles were tested on NXP® P2020RDB.

Highlights

New XML Processing Limits

JAXP: There are three new processing limit attributes introduced in the April 2022 update. These attributes are configurable through the following properties:

- `jdk.xml.xpathExprGrpLimit`

Limits the number of groups an XPath expression can contain.

default: 10

- `jdk.xml.xpathExprOpLimit`

Limits the number of operators an XPath expression can contain.

default: 100

- `jdk.xml.xpathTotalOpLimit`

Limits the total number of XPath operators in an XSL Stylesheet.

default: 10000

These limits are represented by a positive integer. A value less than or equal to 0 indicates no limit. If the value is not an integer, a `NumberFormatException` is thrown.

The following are example messages produced by exceptions thrown when exceeding the default XPath limits.

When exceeding the default XPath limit of the number of groups an XPath expression can contain. This specific situation can be remedied by setting the `jdk.xml.xpathExprGrpLimit` property to a higher value. E.g.

```
-Djdk.xml.xpathExprGrpLimit=11.
```

```
Exception in thread "main" javax.xml.transform.TransformerException:
JAXP0801001: the compiler encountered an XPath expression containing
'11' groups that exceeds the '10' limit set by
'FEATURE_SECURE_PROCESSING'.
    at java.xml/
    ...
```

When exceeding the default XPath limit of the number of operators an XPath expression can contain. This specific situation can be remedied by setting the `jdk.xml.xpathExprOpLimit` property to a higher value. E.g.

```
-Djdk.xml.xpathExprOpLimit=101.
```

```
Exception in thread "main" javax.xml.transform.TransformerException:
JAXP0801002: the compiler encountered an XPath expression containing
'101' operators that exceeds the '100' limit set by
'FEATURE_SECURE_PROCESSING'.
    at java.xml/
    ...
```

When exceeding the default XPath limit of the total number of operators an XSL Stylesheet can contain. This specific situation can be remedied by setting the `jdk.xml.xpathTotalOpLimit` property to a higher value. E.g.

```
-Djdk.xml.xpathTotalOpLimit=10001.
```

```
Exception in thread "main" javax.xml.transform.TransformerException:
JAXP0801003: the compiler encountered XPath expressions with an
accumulated '10001' operators that exceeds the '10000' limit set by
'FEATURE_SECURE_PROCESSING'.
    at java.xml/
    ...
```

The limit source can be identified in the exception message from the following identifiers:

- `FEATURE_SECURE_PROCESSING` - Default limits of 10/100/10000.
- `system property` - Limit set by system property.

- `jaxp.properties` - Limit set by jaxp properties config file.

Notice of Upcoming Changes

- Support for CentOS 8 is discontinued in July 2022.

Known Issues

- During the startup of Azul Zulu 6 on CentOS 8 (FIPS-compliant distributions only) and CentOS Stream 9, you may encounter errors due to missing `libnsl` libraries. As a workaround, you have to install `libnsl` manually for these platforms.

IANA Time Zone Database version

This release of Azul Zulu comes with IANA Time Zone Database version 2021e.

Fixed Issues

This section covers all issues that were fixed in this release.

Fixed Common Vulnerabilities and Exposures

This section summarizes Common Vulnerabilities and Exposures (CVE) fixed in this release.

CVE #	Component	Protocol	Remote Exploit w/o Auth.	Base Score	Attack Vector	Attack Complex	Privileges Req'd	User Interact	Scope	Confidentiality	Integrity	Availability	Azul Zulu Versions Affected	Notes
CVE-2018-25032	ZIP	Multiple	Yes	7.5	Network	Low	None	None	Unchanged	None	None	High	17, 15, 13, 11, 8, 7, 6	Note 2
CVE-2022-21449	Libraries	Multiple	Yes	7.5	Network	Low	None	None	Unchanged	None	High	None	18, 17, 15	Note 1
CVE-2022-21476	Libraries	Multiple	Yes	7.5	Network	Low	None	None	Unchanged	High	None	None	17, 15, 13, 11, 8, 7	Note 1
CVE-2022-21426	JAXP	Multiple	Yes	5.3	Network	Low	None	None	Unchanged	None	None	Low	18, 17, 15, 13, 11, 8, 7, 6	Note 1
CVE-2022-21434	Libraries	Multiple	Yes	5.3	Network	Low	None	None	Unchanged	None	Low	None	18, 17, 15, 13, 11, 8, 7, 6	Note 1
CVE-2022-21496	JNDI	Multiple	Yes	5.3	Network	Low	None	None	Unchanged	None	Low	None	18, 17, 15, 13, 11, 8, 7, 6	Note 1
CVE-2022-21443	Libraries	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	None	Low	18, 17, 15, 13, 11, 8, 7, 6	Note 1
CVE-2022-0778	Oracle GraalVM Enterprise Edition: Node (OpenSSL)	HTTPS	Yes	7.5	Network	Low	None	None	Unchanged	None	None	High	None	

Notes:

ID	Notes
1	This vulnerability applies to Java deployments, that load and run untrusted code (e.g., code that comes from the internet) and rely on the Java sandbox for security. This vulnerability can also be exploited by using APIs in the specified Component, e.g., through a web service which supplies data to the APIs.
2	Our analysis shows that Azul Zulu and OpenJDK are not affected by CVE-2018-25032. In OpenJDK, the Zlib "memLevel" parameter is always set to 8 and can not be changed by a Java code, and the Z_FIXED strategy is permanently disabled. The CVE does not apply to Azul Zulu and OpenJDK with these settings. However, Azul decided to include the corresponding patch to the Zlib library in Azul products just in case someone chooses to use Zlib from Azul Zulu outside of Java applications.

Non-CVE Security Fixes

The following table summarizes non-CVE security fixes implemented in this release.

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-35911	17, 15, 13, 11, 8, 7, 6	improve DDOT handling in xpath	CPU
JDK-8284548	17, 15, 13, 11, 8, 7, 6	Invalid XPath expression causes StringIndexOutOfBoundsException	CPU
JDK-8282397	17, 15, 13, 11, 8, 7, 6	createTempFile method of java.io.File is failing when called with suffix of spaces character	CPU
JDK-8282300	17, 15, 13, 11, 8, 7, 6	Throws NamingException instead of InvalidNameException after JDK-8278972	CPU
JDK-8281498	17, 15, 13, 11, 8, 7, 6	Better DER support	CPU
JDK-8281388	17, 15, 13, 11, 8, 7, 6	Change wrapping of EncryptedPrivateKeyInfo	CPU
JDK-8281152	17, 15, 13, 11, 8, 7, 6	Improved WebKit support	CPU
JDK-8278805	17, 15, 13, 11, 8, 7, 6	Enhance BMP image loading	CPU
JDK-8278798	17, 15, 13, 11, 8, 7, 6	Improve supported intrinsic	CPU
JDK-8278449	17, 15, 13, 11, 8, 7, 6	Improve keychain support	CPU
JDK-8278356	17, 15, 13, 11, 8, 7, 6	Improve file creation	CPU
JDK-8277465	17, 15, 13, 11, 8, 7, 6	Additional fix for JDK-8276371	CPU
JDK-8277227	17, 15, 13, 11, 8, 7, 6	Better identification of OIDs	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8276371	17, 15, 13, 11, 8, 7, 6	Better long buffering	CPU
JDK-8274221	17, 15, 13, 11, 8, 7, 6	More definite BER encodings	CPU
JDK-8272594	17, 15, 13, 11, 8, 7, 6	Better record of recordings	CPU
JDK-8272588	17, 15, 13, 11, 8, 7, 6	Enhanced recording parsing	CPU
JDK-8272261	17, 15, 13, 11, 8, 7, 6	Improve JFR recording file processing	CPU
JDK-8272255	17, 15, 13, 11, 8, 7, 6	Completely handle MIDI files	CPU
JDK-8269938	17, 15, 13, 11, 8, 7, 6	Enhance XML processing passes redux	CPU

OpenJDK Bug Fixes

The following table describes the OpenJDK changes implemented in this release.

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8029837	6	NPE seen in XMLDocumentFragmentScannerImpl.setProperty since 7u40b33	CPU
JDK-8197859	8	VS2017 Complains about UINTPTR_MAX definition in globalDefinitions_VisCPP.hpp	CPU
JDK-8284548	17, 15, 13, 11, 8, 7, 6	Invalid XPath expression causes StringIndexOutOfBoundsException	CPU
JDK-8210283	8, 7	Support git as an SCM alternative in the build	CPU
JDK-8221988	8	add possibility to build with Visual Studio 2019	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8238289	13, 11, 8	Use <i>byteswap</i> functions to implement Bytes::swap_uX on Windows	CPU
JDK-8240983	13	Incorrect copyright header in Apache Santuario 2.1.3 files	CPU
JDK-8282397	17, 15, 13, 11, 8, 7, 6	createTempFile method of java.io.File is failing when called with suffix of spaces character	CPU
JDK-8242468	13, 11, 8	VS2019 build missing vcruntime140_1.dll	CPU
JDK-8282300	17, 15, 13, 11, 8, 7, 6	Throws NamingException instead of InvalidNameException after JDK-8278972	CPU
JDK-8247676	13, 11, 8	vcruntime140_1.dll is not needed on 32-bit Windows	CPU
JDK-8247907	13	XMLDsig logging does not work	CPU
JDK-8247964	13	All log0() in com/sun/org/slf4j/internal/Logger.java should be private	CPU
JDK-8281498	17, 15, 13, 11, 8, 7, 6	Better DER support	CPU
JDK-8249867	15, 13	XML declaration is not followed by a newline	CPU
JDK-8281388	17, 15, 13, 11, 8, 7, 6	Change wrapping of EncryptedPrivateKeyInfo	CPU
JDK-8255255	15, 13	Update Apache Santuario (XML Signature) to version 2.2.1	CPU
JDK-8256722	15, 13, 11, 8	handle VC++:1927 VS2019 in abstract_vm_version	CPU
JDK-8259535	15, 13	ECDSA SignatureValue do not always have the specified length	CPU
JDK-8269938	17, 15, 13, 11, 8, 7, 6	Enhance XML processing passes redux	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8270504	17, 15, 13, 11, 8, 7, 6	Better Xpath expression handling	CPU
JDK-8272255	17, 15, 13, 11, 8, 7, 6	Completely handle MIDI files	CPU
JDK-8272261	17, 15, 13, 11, 8, 7, 6	Improve JFR recording file processing	CPU
JDK-8272588	17, 15, 13, 11, 8, 7, 6	Enhanced recording parsing	CPU
JDK-8280947	13	Adapt test/jdk/javax/xml/crypto/dsig/LogParameters.java for 13u	CPU
JDK-8272594	17, 15, 13, 11, 8, 7, 6	Better record of recordings	CPU
JDK-8273176	15, 13, 11, 8	handle latest VS2019 in abstract_vm_version	CPU
JDK-8043492	8	ad_x86_64_misc.obj : error LNK2011: precompiled object not linked in; image may not run	CPU
JDK-8274221	17, 15, 13, 11, 8, 7, 6	More definite BER encodings	CPU
JDK-8275082	17, 15, 13, 11	Update XML Security for Java to 2.3.0	CPU
JDK-8275151	17, 15, 13, 11, 8, 7, 6	Improved Object Identification	CPU
JDK-8277227	17, 15, 13, 11, 8, 7, 6	Better identification of OIDs	CPU
JDK-8277233	17, 15, 13, 11, 8, 7, 6	Improve ECDSA signature support	CPU
JDK-8277672	17, 15, 13, 11, 8, 7, 6	Better invocation handler handling	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8278008	17, 15, 13, 11, 8, 7, 6	Improve Santuario processing	CPU
JDK-8278356	17, 15, 13, 11, 8, 7, 6	Improve file creation	CPU
JDK-8278449	17, 15, 13, 11, 8, 7, 6	Improve keychain support	CPU
JDK-8278798	17, 15, 13, 11, 8, 7, 6	Improve supported intrinsic	CPU
JDK-8278805	17, 15, 13, 11, 8, 7, 6	Enhance BMP image loading	CPU
JDK-8278972	17, 15, 13, 11, 8, 7, 6	Improve URL supports	CPU
JDK-8280373	17, 15, 13	Update Xalan serializer / SystemIDResolver to align with JDK-8270492	PSU
JDK-8273655	17	content-types.properties files are missing some common types	PSU
JDK-8279505	17	Update documentation for RETRY_COUNT and REPEAT_COUNT	PSU
JDK-8279453	17	Disable tools/jar/ReproducibleJar.java on 32-bit platforms	PSU
JDK-8279445	18, 17	Update JMH devkit to 1.34	PSU
JDK-8279437	18	[JVMCI] exception in HotSpotJVMCIRuntime.translate can exit the VM	PSU
JDK-8279412	18, 17	[JVMCI] failed speculations list must outlive any nmethod that refers to it	PSU
JDK-8279385	17	[test] Adjust sun/security/pkcs12/KeytoolOpensslInteropTest.java after 8278344	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8279379	17, 11	GHA: Print tests that are in error	PSU
JDK-8279300	17, 11	[arm32] SIGILL when running GetObjectSizeIntrinsicsTest	PSU
JDK-8279225	18, 17, 11	[arm32] C1 longs comparison operation destroys argument registers	PSU
JDK-8279223	18	Define version in .jcheck/conf	PSU
JDK-8279124	17	VM does not handle SIGQUIT during initialization	PSU
JDK-8279077	15, 11, 8	JFR crashes on Linux ppc due to missing crash protector in signal handler	PSU
JDK-8279076	17, 11	C2: Bad AD file when matching SqrtF with UseSSE=0	PSU
JDK-8279011	17	JFR: JfrChunkWriter incorrectly handles int64_t chunk size as size_t	PSU
JDK-8278998	13	Bump update version for OpenJDK: jdk-13.0.11	PSU
JDK-8278997	15	Bump update version for OpenJDK: jdk-15.0.7	PSU
JDK-8278987	17	RunThese24H.java failed with EXCEPTION_ACCESS_VIOLATION in <i>write_sample_info</i>	PSU
JDK-8279669	17, 11	test/jdk/com/sun/jdi/TestScaffold.java uses wrong condition	PSU
JDK-8278951	17	containers/cgroup/PlainRead.java fails on Ubuntu 21.10	PSU
JDK-8278871	17, 11	[JVMCI] assert((uint)reason < 2* _trap_hist_limit) failed: oob	PSU
JDK-8278851	18	Correct signer logic for jars signed with multiple digest algorithms	PSU
JDK-8278824	17	Uneven work distribution when scanning heap roots in G1	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8278822	17	Bump update version for OpenJDK: jdk-17.0.3	PSU
JDK-8279695	17	[TESTBUG] modify compiler/loopopts/TestSkeletonPredicateNegation.java to run on C1 also	PSU
JDK-8279702	17, 11	[macosx] ignore xcodebuild warnings on M1	PSU
JDK-8278758	17, 11	runtime/BootstrapMethod/BSMCalledTwice.java fails with release VMs after JDK-8262134	PSU
JDK-8278627	17	Shenandoah: TestHeapDump test failed	PSU
JDK-8278604	17	SwingSet2 table demo does not have accessible description set for images	PSU
JDK-8278526	17	[macos] Screen reader reads SwingSet2 JTable row selection as null, dimmed row for last column	PSU
JDK-8278472	18	Invalid value set to CANDIDATEFORM structure	PSU
JDK-8279833	17, 11	Loop optimization issue in String.encodeUTF8_UTF16	PSU
JDK-8278389	17	SuspendibleThreadSet::_suspend_all should be volatile/atomic	PSU
JDK-8278384	18, 17, 11	Bytecodes::result_type() for arraylength returns T_VOID instead of T_INT	PSU
JDK-8278381	17, 15, 11	[GCC 11] Address::make_raw() does not initialize rspec	PSU
JDK-8279924	17, 11	[PPC64, s390] implement frame::is_interpreted_frame_valid checks	PSU
JDK-8278346	17	java/nio/file/Files/probeContentType/Basic.java fails on Linux SLES15 machine	PSU
JDK-8278344	17	sun/security/pkcs12/KeytoolOpensslInteropTest.java test fails because of different openssl output	PSU
JDK-8278309	17, 15, 13, 11	[windows] use of uninitialized OSThread::_state	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8278241	17	Implement JVM SpinPause on linux-aarch64	PSU
JDK-8278239	17	vmTestbase/nsk/jvmti/RedefineClasses/StressRedefine failed with EXCEPTION_ACCESS_VIOLATION at 0x000000000000000d	PSU
JDK-8278186	18	org.jcp.xml.dsig.internal.dom.Utls.parseIdFromSameDocumentURI throws StringIndexOutOfBoundsException when calling substring method	PSU
JDK-8278185	17	Custom JRE cannot find non-ASCII named module inside	PSU
JDK-8278172	17, 11	java/nio/channels/FileChannel/BlockDeviceSize.java should only run on Linux	PSU
JDK-8278163	17	--with-cacerts-src variable resolved after GenerateCacerts recipe setup	PSU
JDK-8278116	17, 11	runtime/modules/LoadUnloadModuleStress.java has duplicate -Xmx	PSU
JDK-8278115	17, 11	gc/stress/gclocker/TestGCLockerWithSerial.java has duplicate -Xmx	PSU
JDK-8278104	17	C1 should support the compiler directive 'BreakAtExecute'	PSU
JDK-8278099	17	two sun/security/pkcs11/Signature tests failed with AssertionError	PSU
JDK-8278080	17	Add --with-cacerts-src='user cacerts folder' to enable deterministic cacerts generation	PSU
JDK-8278020	17	~13% variation in Renaissance-Scrabble	PSU
JDK-8278016	17	Add compiler tests to tier{2,3}	PSU
JDK-8279998	17, 11	PPC64 debug builds fail with "untested: RangeCheckStub: predicate_failed_trap_id"	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8277992	17, 11	Add fast jdk_svc subtests to jdk:tier3	PSU
JDK-8277919	17	OldObjectSample event causing bloat in the class constant pool in JFR recording	PSU
JDK-8277846	17	Implement fast-path for ASCII-compatible CharsetEncoders on ppc64	PSU
JDK-8277796	11	Bump update version for OpenJDK: jdk-11.0.15	PSU
JDK-8277795	18, 17, 11	LDAP connection timeout not honoured under contention	PSU
JDK-8277777	17	[Vector API] assert(r̄is_XMMRegister()) failed: must be in x86_32.ad	PSU
JDK-8277762	17	Allow configuration of HOTSPOT_BUILD_USER	PSU
JDK-8280002	17	jmap -histo may leak stream	PSU
JDK-8277503	17	compiler/onSpinWait/TestOnSpinWaitAArch64DefaultFlags.java failed with "OnSpinWaitInst with the expected value 'isb' not found."	PSU
JDK-8277497	17	Last column cell in the JTable row is read as empty cell	PSU
JDK-8277449	17	compiler/vectorapi/TestLongVectorNeg.java fails with release VMs	PSU
JDK-8277447	17, 11	Hotspot C1 compiler crashes on Kotlin suspend fun with loop	PSU
JDK-8277441	17, 11	CompileQueue::add fails with assert(!_last̄next() == __null) failed: not last	PSU
JDK-8277385	17, 11	Zero: Enable CompactStrings support	PSU
JDK-8277383	17	VM.metaspace optionally show chunk freelist details	PSU
JDK-8277342	17, 11	vmTestbase/nsk/stress/strace/strace004.java fails with SIGSEGV in InstanceKlass::jni_id_for	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8277328	17, 11	jdk/jshell/CommandCompletionTest.java failures on Windows	PSU
JDK-8277299	17	STACK_OVERFLOW in Java_sun_awt_shell_Win32ShellFolder2_getIconBits	PSU
JDK-8280060	8	The sun/rmi/server/Activation.java class use Thread.dumpStack()	PSU
JDK-8280123	18	C2: Infinite loop in CMoveInNode::Ideal during IGVN	PSU
JDK-8277180	17	Intrinsify recursive ObjectMonitor locking for C2 x64 and A64	PSU
JDK-8277137	17	Set OnSpinWaitInst/OnSpinWaitInstCount defaults to "isb"/1 for Arm Neoverse N1	PSU
JDK-8277069	17	[REDO] JDK-8276743 Make openjdk build Zip Archive generation "reproducible"	PSU
JDK-8276990	18	Memory leak in invoker.c fillInvokeRequest() during JDI operations	PSU
JDK-8276841	17	Add support for Visual Studio 2022	PSU
JDK-8276819	18	javax/print/PrintServiceLookup/FlushCustomClassLoader.java fails to free	PSU
JDK-8276766	17	Enable jar and jmod to produce deterministic timestamped content	PSU
JDK-8276764	17	Enable deterministic file content ordering for Jar and Jmod	PSU
JDK-8276662	17	Scalability bottleneck in SymbolTable::lookup_common()	PSU
JDK-8276654	17	element-list order is non deterministic	PSU
JDK-8276623	17, 11	JDK-8275650 accidentally pushed "out" file	PSU

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JDK-8276314	17, 11	[JVMCI] check alignment of call displacement during code installation	PSU
JDK-8276177	17, 11	nsk/jvmti/RedefineClasses/StressRedefineWithoutBytecodeCorruption failed with "assert(def_ik \times is_being_redefined()) failed: should be being redefined to get here"	PSU
JDK-8276141	17, 15, 13, 11	XPathFactory set/getProperty method	PSU
JDK-8276057	17	Update JMH devkit to 1.33	PSU
JDK-8275874	17	[JVMCI] only support aligned reads in c2v_readFieldValue	PSU
JDK-8275847	17	Scheduling fails with "too many D-U pinch points" on small method	PSU
JDK-8275800	17	Redefinition leaks MethodData::_extra_data_lock	PSU
JDK-8275687	17	runtime/CommandLine/PrintTouchedMethods test shouldn't catch RuntimeException	PSU
JDK-8275650	17, 11	Problemlist java/io/File/createTempFile/SpecialTempFile.java for Windows 11	PSU
JDK-8275645	17	[JVMCI] avoid unaligned volatile reads on AArch64	PSU
JDK-8275643	17	C2's unaryOp vector intrinsic does not properly handle LongVector.neg	PSU
JDK-8275610	17, 13, 11	C2: Object field load floats above its null check resulting in a segfault	PSU
JDK-8275608	17	runtime/Metaspace/elastic/TestMetaspaceAllocationMT2 too slow	PSU
JDK-8275586	17	Zero: Simplify interpreter initialization	PSU
JDK-8275536	17, 11	Add test to check that File::lastModified returns same time stamp as Files.getLastModifiedTime	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8275330	17	C2: assert(n _{is} _Root() n _{is} _Region() n _{is} _Phi() n _{is} _MachMerge()) def_block _{dominates} (block)) failed: uses must be dominated by definitions	PSU
JDK-8275326	17, 11	C2: assert(no_dead_loop) failed: dead loop detected	PSU
JDK-8280155	17, 11	[PPC64, s390] frame size checks are not yet correct	PSU
JDK-8280414	18, 17, 15, 13, 11	Memory leak in DefaultProxySelector	PSU
JDK-8274944	17	AppCDS dump causes SEGV in VM thread while adjusting lambda proxy class info	PSU
JDK-8274935	17	dumptime_table has stale entry	PSU
JDK-8274795	17, 11	AArch64: avoid spilling and restoring r18 in macro assembler	PSU
JDK-8274753	17	ZGC: SEGV in MetaspaceShared::link_shared_classes	PSU
JDK-8274751	18	Drag And Drop hangs on Windows	PSU
JDK-8274750	17	java/io/File/GetXSpace.java failed: '/dev': 191488 != 190976	PSU
JDK-8274714	17, 11	Incorrect verifier protected access error message	PSU
JDK-8274658	17, 15, 13, 11	ISO 4217 Amendment 170 Update	PSU
JDK-8274562	17	(fs) UserDefinedFileAttributeView doesn't correctly determine if supported when using OverlayFS	PSU
JDK-8274524	17, 15, 13, 11, 8	SSLSocket.close() hangs if it is called during the ssl handshake	PSU
JDK-8274506	17	TestPids.java and TestPidsLimit.java fail with podman run as root	PSU

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JDK-8274471	17	Add support for RSASSA-PSS in OCSP Response	PSU
JDK-8274465	17, 11	Fix javax/swing/text/ParagraphView/6364882/bug63 64882.java failures	PSU
JDK-8280526	18, 17, 11	x86_32 Math.sqrt performance regression with -XX:UseSSE={0,1}	PSU
JDK-8274171	17	java/nio/file/Files/probeContentType/Basic.java failed on "Content type" mismatches	PSU
JDK-8280550	18	SplittableRandom#nextDouble(double,double) can return result >= bound	PSU
JDK-8273972	17	Multi-core choke point in CMM engine (LCMSTransform.doTransform)	PSU
JDK-8273967	17	gtest os.dll_address_to_function_and_library_name_vm fails on macOS12	PSU
JDK-8273933	17, 11	[TESTBUG] Test must run without preallocated exceptions	PSU
JDK-8273895	17	compiler/ciReplay/TestVMNoCompLevel.java fails due to wrong data size with TieredStopAtLevel=2,3	PSU
JDK-8273704	17, 11	DrawStringWithInfiniteXform.java failed : drawString with InfiniteXform transform takes long time	PSU
JDK-8273634	17, 11	[TEST_BUG] Improve javax/swing/text/ParagraphView/6364882/bug63 64882.java	PSU
JDK-8273526	17	Extend the OSContainer API pids controller with pids.current	PSU
JDK-8273438	17, 11	Enable parallelism in vmTestbase/metaspaces/stressHierarchy tests	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8273433	17, 11	Enable parallelism in vmTestbase_nsk_sysdict tests	PSU
JDK-8273387	17	remove some unreferenced gtk-related functions	PSU
JDK-8273381	17	Assert in PtrQueueBufferAllocatorTest.stress_free_list_allocator_vm	PSU
JDK-8273366	17, 11	[testbug] javax/swing/UIDefaults/6302464/bug6302464.java fails on macOS12	PSU
JDK-8273351	17	bad tag in jdk.random module-info.java	PSU
JDK-8273341	17, 15, 13, 11, 8	Update Siphash to version 1.0	PSU
JDK-8273277	17, 11	C2: Move conditional negation into rc_predicate	PSU
JDK-8280785	18	change milestone to fcs for releases: jdk-11.0.15, jdk-17.0.3, jdk-18.0.1	PSU
JDK-8273162	17	AbstractSplittableWithBrineGenerator does not create a random salt	PSU
JDK-8273139	18	C2: assert(f > 1 && f >= 0) failed: Incorrect frequency	PSU
JDK-8272996	18, 17	JNDI DNS provider fails to resolve SRV entries when IPV6 stack is enabled	PSU
JDK-8272866	17	java.util.random package summary contains incorrect mixing function in table	PSU
JDK-8280910	18	Update openjdk project in jcheck to "jdk-updates" for jdk18u	PSU
JDK-8280950	18	RandomGenerator:NextDouble() default behavior non conformant after JDK-8280550 fix	PSU

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JDK-8272553	17	several hotspot runtime/CommandLine tests don't check exit code	PSU
JDK-8272541	17, 15, 13, 11	Incorrect overflow test in Toom-Cook branch of BigInteger multiplication	PSU
JDK-8272398	17	Update DockerTestUtils.buildJdkDockerImage()	PSU
JDK-8272327	17	Shenandoah: Avoid enqueueing duplicate string candidates	PSU
JDK-8280999	11	array_bounds should be array-bounds after 8278507	PSU
JDK-8281061	17, 11	[s390] JFR runs into assertions while validating interpreter frames	PSU
JDK-8272167	17, 15	AbsPathsInImage.java should skip *.dSYM directories	PSU
JDK-8271721	17	Split gc/g1/TestMixedGCLiveThreshold into separate tests	PSU
JDK-8271506	17	Add ResourceHashtable support for deleting selected entries	PSU
JDK-8271202	17, 11	C1: assert(false) failed: live_in set of first block must be empty	PSU
JDK-8271199	17	Mutual TLS handshake fails signing client certificate with custom sensitive PKCS11 key	PSU
JDK-8271056	17	C2: "assert(no_dead_loop) failed: dead loop detected" due to cmoving identity	PSU
JDK-8270874	17, 11	JFrame paint artifacts when dragged from standard monitor to HiDPI monitor	PSU
JDK-8281093	18	Violating Attribute-Value Normalization in the XML specification 1.0	PSU
JDK-8270117	17	Broken jtreg link in "Building the JDK" page	PSU

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JDK-8281183	18	RandomGenerator:NextDouble() default behavior partially fixed by JDK-8280950	PSU
JDK-8269849	17	vmTestbase/gc/gctests/PhantomReference/phantom002/TestDescription.java failed with "OutOfMemoryError: Java heap space: failed reallocation of scalar replaced objects"	PSU
JDK-8269616	17	serviceability/dcmd/framework/VMVersionTest.java fails with Address already in use error	PSU
JDK-8269523	17	runtime/Safepoint/TestAbortOnVMOperationTimeout.java failed when expecting 'VM operation took too long'	PSU
JDK-8269206	17	A small typo in comment in test/lib/sun/hotspot/WhiteBox.java	PSU
JDK-8269175	17	[macosx-aarch64] wrong CPU speed in hs_err file	PSU
JDK-8269087	17	CheckSegmentedCodeCache test fails in an emulated-client VM	PSU
JDK-8269037	17	jsig/Testjsig.java doesn't have to be restricted to linux only	PSU
JDK-8269032	17	Stringdedup tests are failing if the ergonomically select GC does not support it	PSU
JDK-8268542	11	serviceability/logging/TestFullNames.java tests only 1st test case	PSU
JDK-8268427	8	Improve AlgorithmConstraints:checkAlgorithm performance	PSU
JDK-8268014	11	Build failure on SUSE Linux Enterprise Server 11.4 (s390x) due to 'SYS_get_mempolicy' was not declared	PSU
JDK-8267341	18	macos attempt_reserve_memory_at(arg1, arg2, true) failure	PSU

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JDK-8266889	11	[macosx-aarch64] Crash with SIGBUS in MarkActivationClosure::do_code_blob during vmTestbase/nsk/jvmti/.../bi04t002 test run	PSU
JDK-8266749	8	AArch64: Backtracing broken on PAC enabled systems	PSU
JDK-8266490	17	Extend the OSContainer API to support the pids controller of cgroups	PSU
JDK-8266421	11	Deadlock in Sound System	PSU
JDK-8266187	11	Memory leak in appendBootClassPath()	PSU
JDK-8265150	17, 11	AsyncGetCallTrace crashes on ResourceMark	PSU
JDK-8264650	11	Cross-compilation to macos/aarch64	PSU
JDK-8263567	17	gtests don't terminate the VM safely	PSU
JDK-8263185	11	Mallinfo deprecated in glibc 2.33	PSU
JDK-8262903	11	[macos_aarch64] Thread::current() called on detached thread	PSU
JDK-8262896	11	[macos_aarch64] Crash in jni_fast_GetLongField	PSU
JDK-8262894	11	[macos_aarch64] SIGBUS in Assembler::ld_st2	PSU
JDK-8262134	17, 11	compiler/uncommontrap/TestDeoptOOM.java failed with "guarantee(false) failed: wrong number of expression stack elements during deopt"	PSU
JDK-8261534	15	Test sun/security/pkcs11/KeyAgreement/IllegalPackageAccess.java fails on platforms where no nsslib artifacts are defined	PSU
JDK-8261205	11	AssertionError: Cannot add metadata to an intersection type	PSU
JDK-8261107	15, 11	ArrayIndexOutOfBoundsException in the ICC_Profile.getInstance(InputStream)	PSU

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JDK-8281262	18	Windows builds in different directories are not fully reproducible	PSU
JDK-8258814	18	Compilation logging crashes for thread suspension / debugging tests	PSU
JDK-8258554	11	javax/swing/JTable/4235420/bug4235420.java fails in GTK L&F	PSU
JDK-8257769	11	Cipher.getParameters() throws NPE for ChaCha20-Poly1305	PSU
JDK-8257467	11	[TESTBUG] -Wdeprecated-declarations is reported at sigset() in exesigtest.c	PSU
JDK-8281275	18	Upgrading from 8 to 11 no longer accepts '/' as filepath separator in gc paths	PSU
JDK-8256373	11	[Windows/HiDPI] The Frame#setBounds does not work in a minimized state	PSU
JDK-8256321	11	Some "inactive" color profiles use the wrong profile class	PSU
JDK-8256154	11	Some TestNG tests require default constructors	PSU
JDK-8255410	11	Add ChaCha20 and Poly1305 support to SunPKCS11 provider	PSU
JDK-8281374	15	Add MD5.implCompress0 to Graal toBelInvestigated list after 8280978	PSU
JDK-8255239	11	The timezone of the hs_err_pid log file is corrupted in Japanese locale	PSU
JDK-8255035	11	Update BCEL to Version 6.5.0	PSU
JDK-8254940	11	AArch64: Cleanup non-product thread members	PSU
JDK-8254827	11	JVMCI: Enable it for Windows+AArch64	PSU

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JDK-8254085	11	javax/swing/text/Caret/TestCaretPositionJTextPane.java failed with "RuntimeException: Wrong caret position"	PSU
JDK-8254072	11	AArch64: Get rid of --disable-warnings-as-errors on Windows+ARM64 build	PSU
JDK-8253795	11	Implementation of JEP 391: macOS/AArch64 Port	PSU
JDK-8253639	15	Change os::attempt_reserve_memory_at parameter order	PSU
JDK-8253638	15	Cleanup os::reserve_memory and remove MAP_FIXED	PSU
JDK-8253353	8	Crash in C2: guarantee(n != NULL) failed: No Node	PSU
JDK-8253197	17, 11	vmTestbase/nsk/jvmti/StopThread/stopthrd007/TestDescription.java fails with "ERROR: DebuggeeSleepingThread: ThreadDeath lost"	PSU
JDK-8251558	11	J2DBench should support shaped and translucent windows	PSU
JDK-8251260	15	two MD5 tests fail "RuntimeException: Unexpected count of intrinsic"	PSU
JDK-8251216	17, 15	Implement MD5 intrinsics on AArch64	PSU
JDK-8251132	11	make main classes public in vmTestbase/jit tests	PSU
JDK-8250902	15	Implement MD5 Intrinsics on x86	PSU
JDK-8250750	11	JDK-8247515 fix for OSX pc_to_symbol() lookup fails with some symbols	PSU
JDK-8281460	17	Let ObjectMonitor have its own NMT category	PSU
JDK-8247980	17	Exclusive execution of java/util/stream tests slows down tier1	PSU
JDK-8281520	11	JFR: A wrong parameter is passed to the constructor of LeakClassWriter	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8281599	11	test/lib/jdk/test/lib/KnownOIDs.java is redundant since JDK-8268801	PSU
JDK-8247766	8	AArch64: guarantee(val < (1U << nbits)) failed: Field too big for insn	PSU
JDK-8282219	17	jdk/java/lang/ProcessBuilder/Basic.java fails on AIX	PSU
JDK-8247515	11	OSX pc_to_symbol() lookup does not work with core files	PSU
JDK-8247272	11	SA ELF file support has never worked for 64-bit causing address to symbol name mapping to fail	PSU
JDK-8244602	17	Add JTREG_REPEAT_COUNT to repeat execution of a test	PSU
JDK-8282372	11	[11] build issue on MacOS/aarch64 12.2.1 using Xcode 13.1: call to 'log2_intptr' is ambiguous	PSU
JDK-8241768	8, 7	git needs .gitattributes	PSU
JDK-8241423	11	NUMA APIs fail to work in dockers due to dependent syscalls are disabled by default	PSU
JDK-8241004	11	NMT tests fail on unaligned thread size with debug build	PSU
JDK-8282761	17, 15, 13, 11	XPathFactoryImpl remove setProperty and getProperty methods	PSU
JDK-8240904	11	Screen flashes on test failures when running tests from make	PSU
JDK-8240633	8	Memory leaks in the implementations of FileChooserUI	PSU
JDK-8240353	13	AArch64: missing support for -XX:+ExtendedDTraceProbes in C1	PSU

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JDK-8239502	17, 11	[TEST_BUG] Test javax/swing/text/FlowView/6318524/bug6318524.java never fails	PSU
JDK-8283018	11	11u GHA: Update GCC 9 minor versions	PSU
JDK-8236505	17, 11	Mark jdk/editpad/EditPadTest.java as @headful	PSU
JDK-8236210	11	javac generates wrong annotation for fields generated from record components	PSU
JDK-8234930	11	Use MAP_JIT when allocating pages for code cache on macOS	PSU
JDK-8233986	11	ProblemList javax/swing/plaf/basic/BasicTextUI/8001470/bug8001470.java for windows-x64	PSU
JDK-8233827	11	Enable screenshots in the enhanced failure handler on Linux/macOS	PSU
JDK-8232533	11	G1 uses only a single thread for pretouching the java heap	PSU
JDK-8227815	8	Minimal VM: set_state is not a member of AttachListener	PSU
JDK-8227738	8	jvmti/DataDumpRequest/datadumpreq001 failed due to "exit code is 134"	PSU
JDK-8225690	8	Multiple AttachListener threads can be created	PSU
JDK-8225559	17, 11	assertion error at TransTypes.visitApply	PSU
JDK-8223142	11	Clean-up WS and CB.	PSU
JDK-8222825	11	ARM32 SIGILL issue on single core CPU (not supported PLDW instruction)	PSU
JDK-8283270	11	[11u] broken JRT_ENTRY_NO_ASYNC after Backport of JDK-8253795	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8220634	11	SymLinkArchiveTest should handle not being able to create symlinks	PSU
JDK-8218682	8	[TEST_BUG] DashOffset fails in mach5	PSU
JDK-8216969	11	ParseException thrown for certain months with russian locale	PSU
JDK-8214026	11	Canonicalized archive paths appearing in diagnostics	PSU
JDK-8214004	11	Missing space between compiler thread name and task info in hs_err	PSU
JDK-8211333	11	AArch64: Fix another build failure after JDK-8211029	PSU
JDK-8211170	11	AArch64: Warnings in C1 and template interpreter	PSU
JDK-8283778	11	11u GHA: Fix GCC 9 ubuntu package names	PSU
JDK-8210236	11	Prepare ciReceiverTypeData::translate_receiver_data_from for concurrent class unloading	PSU
JDK-8210194	11	[TESTBUG] jvmti_FollowRefObjects.cpp missing initializer for member _jvmtiHeapCallbacks::heap_reference_callback	PSU
JDK-8209915	11	Fix license headers	PSU
JDK-8208074	11	[TESTBUG] vmTestbase/nsk/jvmti/RedefineClasses/StressRe defineWithoutBytecodeCorruption/TestDescription .java failed with NullPointerException	PSU
JDK-8207793	11	[TESTBUG] runtime/Metaspace/FragmentMetaspace.java fails: heap needs to be increased	PSU
JDK-8207011	11	Remove uses of the register storage class specifier	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8205540	8	test/hotspot/jtreg/vmTestbase/nsk/jdb/trace/trac e001/trace001.java fails with Debuggee did not exit after 15 <cont> commands	PSU
JDK-8202822	8	Add .git to .hgignore	PSU
JDK-8202142	11	jfr/event/io/TestInstrumentation is unstable	PSU
JDK-8199079	11	Test javax/swing/UIDefaults/6302464/bug6302464.jav a is unstable	PSU
JDK-8198411	8	[TEST_BUG] Two java2d tests are unstable in mach5	PSU
JDK-8284920	17, 15, 13, 11, 8, 7	Incorrect Token type causes XPath expression to return empty result	PSU
JDK-8193277	11	SimpleFileObject inconsistency between getName and getShortName	PSU
JDK-8190748	17, 11	java/text/Format/DateFormat/DateFormatTest.jav a and NonGregorianFormatTest fail intermittently	PSU
JDK-8186780	11	clang fastdebug assertion failure in os_linux_x86:os::verify_stack_alignment()	PSU
JDK-8186670	17, 15	Implement _onSpinWait() intrinsic for AArch64	PSU
JDK-8177814	17, 11	jdk/editpad is not in jdk TEST.groups	PSU
JDK-8167014	8	jdeps: Missing message: warn.skipped.entry	PSU
JDK-8162572	8	Update License Header for all JAXP sources	PSU
JDK-8141508	8	java.lang.invoke.LambdaConversionException: Invalid receiver type ...	PSU
JDK-8065704	13, 11	Set LC_ALL=C for all relevant commands in the build system	PSU
JDK-8274130	17	C2: MulNode::Ideal chained transformations may act on wrong nodes	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8041523	8	Xerces Update: Serializer improvements from Xalan	PSU
JDK-8037259	8	Xerces Update: XPointer update	PSU
JDK-8035577	8	Xerces Update: impl/xpath/regex/RangeToken.java	PSU
JDK-8035437	8	Xerces Update: xml/serialize/DOMSerializerImpl	PSU
JDK-8033980	8	Xerces Update: datatype XMLGregorianCalendarImpl and DurationImpl	PSU
JDK-8284936	8	Placeholder for 2022-04 CPU	PSU

OpenJFX Bug Fixes

The following table describes the OpenJFX changes implemented in this release.

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8276371	17, 15, 13, 11, 8, 7, 6	Better long buffering	CPU
JDK-8278980	18, 17, 8	Update WebKit to 613.1	CPU
JDK-8282134	18, 17	Certain regex can cause a JS trap in WebView	CPU
JDK-8277465	17, 15, 13, 11, 8, 7, 6	Additional fix for JDK-8276371	CPU
JDK-8282099	18, 17, 8	Cherry-pick WebKit 613.1 stabilization fixes (2)	CPU
JDK-8281089	18, 17	JavaFX built with VS2019 and jlinked into JDK 11.x fails to start	CPU
JDK-8281152	17, 15, 13, 11, 8, 7, 6	Improved WebKit support	CPU
JDK-8281711	18, 17, 8	Cherry-pick WebKit 613.1 stabilization fixes	CPU
JDK-8281459	18, 17, 8	WebKit 613.1 build broken on M1	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8281953	18	NullPointerException in InputMethod components in JFXPanel	PSU
JDK-8282093	18	LineChart path incorrect when outside lower bound	PSU
JDK-8282100	18	Missed top/left bouncing for ScrollPane on Raspberry Pi with Touchscreen	PSU
JDK-8280841	18	Update SQLite to 3.37.2	PSU
JDK-8280840	18	Update libFFI to 3.4.2	PSU
JDK-8280020	18	Underline and line-through not straight in WebView	PSU
JDK-8279228	18	Leak in ScrollPaneSkin, related to touch events	PSU
JDK-8279013	18	ES2Pipeline fails to detect AMD vega20 graphics card	PSU
JDK-8283183	18	Skip failing PredefinedMeshManagerTest tests	PSU
JDK-8278759	18	PointerEvent: buttons property set to 0 when mouse down	PSU
JDK-8277853	18	With Touch enabled devices scrollbar disappears and the table is scrolled to the beginning	PSU
JDK-8277572	18	ImageStorage should correctly handle MIME types for images encoded in data URIs	PSU
JDK-8280951	18	Testbug: fix commented asserts in XXViewTest.test_rt_29650	PSU
JDK-8277309	18	Add support for H.265/HEVC to HTTP Live Streaming	PSU
JDK-8277122	18	SplitPane divider drag can hang the layout	PSU
JDK-8283328	8	Update libxml2 to 2.9.13	PSU
JDK-8273336	18	Clicking a selected cell from a group of selected cells in a TableView clears the selected items list but remains selected	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8271054	18	[REDO] Wrong stage gets focused after modal stage creation	PSU
JDK-8270867	18	Debug build of WebKit 613.1 fails on Linux	PSU
JDK-8269115	18	WebView paste event contains old data	PSU
JDK-8267892	8	Add .gitattributes to repo	PSU
JDK-8255940	18	localStorage is null after window.close()	PSU
JDK-8251481	18	TableCell accessing row: NPE on auto-sizing	PSU
JDK-8244297	8	Provide utility for testing for memory leaks	PSU
JDK-8244234	18	MenuBar: NPE on removing from scene with open popup	PSU
JDK-8244075	8	Accelerator of ContextMenu's MenuItem is not removed when ContextMenu is removed from Scene	PSU
JDK-8242544	8	CMD+ENTER key event crashes the application when invoked on dialog	PSU
JDK-8231735	8	gradle checkrepo is obsolete and doesn't work with git	PSU
JDK-8231692	8	Test Infrastructure: enhance KeyEventFirer to inject keyEvents into scene	PSU
JDK-8223722	8	Cleanup .gitignore file	PSU
JDK-8223719	8	Add .gitignore to repo	PSU
JDK-8189641	8	[Accessibility, windows] NPE when navigating to ComboBox with empty string	PSU
JDK-8187309	18	TableCell must not change tree's data	PSU
JDK-8187307	18	ListView, TableView, TreeView: receives editCancel event when edit is committed	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8151974	8	Invisible controls are still accessible by screen readers.	PSU

Azul Zulu Bug Fixes

The following table describes the Azul Zulu bug fixes implemented in this release.

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-35752	8	some vm tests failed against zulu8.61.0.12 on windows 32bit	CPU
ZULU-35911	17, 15, 13, 11, 8, 7, 6	improve DDOT handling in xpath	CPU
ZULU-35077	8	Update get_source.sh to support git mono repo	CPU
ZULU-35826	17, 15, 13, 11, 8, 7, 6	Improve deflate routines	CPU
ZULU-35819	17	regression tests runtime/SelectionResolution/* failed: SIGSEGV	PSU
ZULU-35818	17	CDS tests fails with assertion if CRS enabled	PSU
ZULU-35753	8	Update JFX to zulu8u332-b01	PSU
ZULU-35827	8	Fix criu version at get_source.sh	PSU
ZULU-35379	8	[ppc] ShouldNotCall() error (atomic_linux_ppc.inline.hpp)	PSU
ZULU-35318	8	Zulu qnx/arm32 build crashes on 'java -version'	PSU
ZULU-35161	8	Upgrade BC-FIPS to version 1.0.2.3	PSU
ZULU-35141	8	Update OpenJSSE version to 1.1.10	PSU
ZULU-35115	8	zulu8 git: zulu-cr build is broken	PSU
ZULU-35080	8	zulu-cr get_source.sh fails with git 2.17	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-35986	8	Update JFX to zulu8u332-b02	PSU
ZULU-34989	8, 7	Add .gitattributes to zulu8 repo	PSU
ZULU-34955	17	Failure in about 50 security tests - LinkageError occurred while loading main class com.sun.javatest.regtest.agent.MainWrapper	PSU
ZULU-34954	17, 15, 13, 11, 8	Linux devkit with linker --build-id option	PSU
ZULU-34883	17	integrate CRS agent to Zulu17	PSU
ZULU-34653	17, 15, 13, 11, 8	Linux devkit with new dtags disabled	PSU
ZULU-34565	8	macos-aarch64 is broken after JDK-8266749	PSU
ZULU-34060	8	Enable GuaranteedSafepointInterval and CleanChunkPoolAsync as product options	PSU
ZULU-33783	11	Backport unified aarch32 patch to zulu11	PSU
ZULU-33779	8	build CRS agent on windows platform	PSU
ZULU-33777	11	backout harfbuzz workaround for ZULU-1478	PSU
ZULU-33771	11	Update to Studio 12.6 for building on Solaris	PSU
ZULU-33492	8	ppc debug build failure after 8248901	PSU
ZULU-33490	8	fastdebug build failed after 8268494	PSU
ZULU-29740	15	JCK api/javax_net/ssl/SSLSocket/setUseClientMode.html fails with Zulu8,13,15	PSU
ZULU-18820	11	Unified aarch32 build	PSU

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