



Azul Zulu builds of OpenJDK

January 2023 Quarterly Update

Release Notes

Revision 1.3

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Revision History

Revision	Date	Description
0.1	January 17, 2023	Initial version of the document.
0.2	January 17, 2023	Added additional info.
0.3	January 17, 2023	Added initial lists of bug fixes.
0.4	January 17, 2023	Added version numbers.
0.5	January 17, 2023	Updated supported platforms.
0.6	January 17, 2023	Added a note regarding missing CVE table.
1.0	January 17, 2023	Added CVE list.
1.1	January 17, 2023	Fixed zulu6_tpl. Fixed gstreamer license change description.
1.2	January 20, 2023	Update legal notice, 2022 to 2023.
1.3	February 15, 2023	Added CR and CRIU information.

Release Details

This release is a quarterly update release for Azul Zulu Builds of OpenJDK version 19, 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	
19.32.13 (CA) 19.32.14 (SA)	PSU	19.0.2+7	19.30	19.0.1+10	19.0.2+102
17.39.20 (SA)	CPU	17.0.5.0.101+4	17.38	17.0.5+8	19.0.1.0.101+102
17.40.19 (CA) 17.40.20 (SA)	PSU	17.0.6+10	17.39	17.0.5.0.101+4	19.0.2+102
15.45.18 (SA)	CPU	15.0.9.0.101+3	15.44	15.0.9+5	19.0.1.0.101+102
15.46.17 (CA) 15.46.18 (SA)	PSU	15.0.10+5	15.45	15.0.9.0.101+3	19.0.2+102
13.53.18 (SA)	CPU	13.0.13.0.101+3	13.52	13.0.13+5	19.0.1.0.101+102
13.54.17 (CA) 13.54.18 (SA)	PSU	13.0.14+5	13.53	13.0.13.0.101+3	19.0.2+102
11.61.18 (SA)	CPU	11.0.17.0.101+3	11.60	11.0.17+8	19.0.1.0.101+102
11.62.17 (CA) 11.62.18 (SA)	PSU	11.0.18+10	11.61	11.0.17.0.101+3	19.0.2+102
8.67.0.22 (SA)	CPU	8u361-b05	8.66	8u352-b08	8u361-b02
8.68.0.19 (CA) 8.68.0.20 (SA)	PSU	8u362-b08	8.67	8u361-b05	8u362-b03
7.59.0.18 (SA)	CPU	7u371-b03	7.57	7u361-b02	N/A
6.53.0.12 (SA)	CPU	6b153	6.51	6b151	N/A

* Azul provides two 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.
- **CA** are Azul Zulu builds of OpenJDK that are free to download and use.

NOTE

Both SA and CA distributions may contain Early Access builds noted with `-ea-` in their filename. Early Access builds may not be TCK certified.

** 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 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 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	19
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 9.x	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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 Stream	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ubuntu 22.04	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
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 [1] [2]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux (ARM 32-bit Hard-Float)								
Ubuntu 18.04 [3]	n/a	n/a	Yes	Yes	n/a	n/a	Yes	n/a
Raspbian 10 Buster [3]	n/a	n/a	Yes	Yes	n/a	n/a	Yes	n/a
Raspbian 9 Stretch [3]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux with kernel 3.10.x and glibc 2.9 [3] [4]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux (ARM 32-bit Soft-Float) [5]								
Linux with kernel 2.6.34 and glibc 2.5 [6]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Debian 7 Wheezy [7]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux with kernel 3.10.x and glibc 2.9 [7]	n/a	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Linux (MIPS 32-bit) [8]								
Linux with kernel 4.9.59 and glibc 2.9 [9]	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 [10]	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 [11]	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 13	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
macOS 12	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MacOS (Apple Silicon)								
macOS 13	n/a	n/a	Yes	Yes	Yes	Yes	Yes	Yes
macOS 12	n/a	n/a	Yes	Yes	Yes	Yes	Yes	Yes
Solaris (x86 and Sparc)								
Solaris 11	n/a	Yes	Yes	Yes	n/a	n/a	n/a	n/a
Solaris 10	n/a	Yes	Yes	n/a	n/a	n/a	n/a	n/a

1. Bundles with the Checkpoint/Restore (with the `criu` suffix) functionality require kernel 4.4.0+.
2. Bundles compiled with GCC 9 (with the `gcc9` suffix) require glibc 2.29.
3. 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.
4. Bundles with the CRaM (with the `cr` suffix) functionality require glibc 2.13.
5. Bundles with the C1 compiler will use FPU, if it is present and available, to speed up floating point operations. Bundles with both C1 and C2 compilers require FPU.
6. Bundles with the C1 compiler. Tested on ARMv5 hardware.
7. Bundles with the C1 compiler were tested on ARMv6 and ARMv7 hardware. Bundles with both C1 and C2 compilers were tested on ARMv7 hardware.
8. MIPS32r2 ISA, Big Endian, FPU in 32-bit mode or equivalent emulation.
9. Linux soft-float O32 MIPS ABI
10. Bundles for this platform were tested on QorIQ® T4240-RDB.
11. Hard-Float EABI bundles were tested on QorIQ® T1024RDB. SPE ABI bundles were tested on NXP® P2020RDB.

What's New

Removal of OpenJSSE from some Azul Zulu Builds of OpenJDK

Although already announced in the October release, these modifications are now applied to Azul Zulu Builds of OpenJDK.

- OpenJSSE/Legacy8uJSSE is no longer included in free Azul Zulu Builds of OpenJDK (CA configurations).
- OpenJSSE/Legacy8uJSSE is no longer included in Azul Zulu Builds of OpenJDK for Java 8 Compact Profile 1 configurations for 32-bit Arm platforms.

Additionally, with this release, OpenJSSE/Legacy8uJSSE are no longer included in Azul Zulu Builds of OpenJDK for PPC32 and ARMv8 Zulu 8 CP1 bundles.

HSDIS support for Zulu 11 and Zulu 17

The Java Disassembler tool, HSDIS, was added to the JDK packages for 64-bit platforms for Windows, Linux, macOS in the Zulu 11 and Zulu 17 SA configurations.

New and Changed Properties

In this release, several new properties are introduced:

- `jdk.tls.enabledTlsResumeCookie`: controls whether stateless cookie exchange is done during TLS session resumption is introduced. The default value is `true`.
- `jdk.sound.jarSoundBank`: controls whether the sound bank data can be processed directly from JAR files. The default value is `false`. Set this property to `true` if you want to process sound bank data directly from jar files.
- For Java 6, 7, and 8: JDK's CORBA implementation now refuses by default to deserialize objects, unless they have the "IOR:" prefix. The previous behaviour can be re-enabled by setting the new property `com.sun.CORBA.ORBAllowDeserializeObject` to `true`.
- Loading a linked ICC profile within a BMP image is now disabled by default. To re-enable it, set the new system property `sun.imageio.bmp.enableLinkedProfiles` to `true`. This new property replaces the old property,

```
sun.imageio.plugins.bmp.disableLinkedProfiles.
```

ISO-related changes in CPU releases

The codes for historic denominations of currencies and funds have been extended with

- [JDK-8289549](#): ISO 4217 Amendment 172 Update, 1 October 2022: changes in entity SIERRA LEONE.
- [JDK-8294307](#): ISO 4217 Amendment 173 Update, 23 September 2022: renaming of TÜRKİYE.
- [JDK-8296239](#): ISO 4217 Amendment 174 Update, 02 November 2022: currency changes for CROATIA.

Configuration changes

We plan to reduce the testing cycles for the following environments targeting their end of life.

- Solaris Zulu 6
- All NV bundles
- RHEL5 builds

If you are still using any of these, we will be providing Azul Platform Core versions for you and can help you if issues would arise! Please email us at support@azul.com.

Notice of Upcoming Changes

- Zulu 13 and 15 are EOL on March 2023. This January 2023 update release is the last one for these versions.
- Starting from April 2023, we plan to reduce the testing cycles for Windows Client 8.1 targeting its end of life.

Known Issues

There are no new known issues to report in this release.

IANA Time Zone Database version

This release of Azul Zulu comes with IANA Time Zone Database version 2022g.

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-2023-21830	Serialization	Multiple	Yes	5.3	Network	Low	None	None	Unchanged	None	Low	None	8, 7, 6	
CVE-2023-21835	JSSE	DTLS	Yes	5.3	Network	Low	None	None	Unchanged	None	None	Low	19, 17, 15, 13, 11	
CVE-2023-21843	Sound	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	Low	None	19, 17, 15, 13, 11, 8, 7, 6	
CVE-2022-43548	Oracle GraalVM Enterprise Edition: Node (Node.js)	HTTPS	Yes	8.1	Network	High	None	None	Unchanged	High	High	High	None	

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
JDK-8283277	8, 7	ISO 4217 Amendment 171 Update	CPU,PSU
JDK-8299628	19, 17, 15, 13, 11, 8	BMP top-down images fail to load after JDK-8289336	CPU,PSU
JDK-8297804	19, 17, 15, 13, 11, 8, 7, 6	(tz) Update Timezone Data to 2022g	CPU,PSU
JDK-8296239	19, 17, 15, 13, 11, 8, 7	ISO 4217 Amendment 174 Update	CPU,PSU
JDK-8296108	19, 17, 15, 13, 11, 8, 7, 6	(tz) Update Timezone Data to 2022f	CPU,PSU
JDK-8295723	19, 17, 15, 13, 11, 8, 7, 6	security/infra/wycheproof/RunWycheproof.java fails with Assertion Error	CPU,PSU
JDK-8295687	19, 17, 15, 13, 11, 8, 7, 6	Better BMP bounds	CPU,PSU
JDK-8295173	19, 17, 15, 13, 11, 8, 7, 6	(tz) Update Timezone Data to 2022e	CPU,PSU
JDK-8294779	19, 17, 15, 13, 11, 8	Improve FX pages	CPU,PSU
JDK-8294357	19, 17, 15, 13, 11, 8, 7, 6	(tz) Update Timezone Data to 2022d	CPU,PSU
JDK-8294307	19, 17, 15, 13, 11, 8, 7	ISO 4217 Amendment 173 Update	CPU,PSU
JDK-8293734	19, 17, 15, 13, 11, 8, 7, 6	Improve BMP image handling	CPU,PSU
JDK-8293717	19, 17, 15, 13, 11, 8, 7, 6	Objective view of ObjectView	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8293598	19, 17, 15, 13, 11, 8, 7, 6	Enhance InetAddress address handling	CPU,PSU
JDK-8292112	19, 17, 15, 13, 11, 8	Better DragView handling	CPU,PSU
JDK-8292105	19, 17, 15, 13, 11, 8	Improve Robot functionality	CPU,PSU
JDK-8292097	19, 17, 15, 13, 11, 8	Better video decoding	CPU,PSU
JDK-8289549	8, 7	ISO 4217 Amendment 172 Update	CPU,PSU
JDK-8289350	17, 15, 13, 11, 8, 7, 6	Better media supports	CPU,PSU
JDK-8289343	19, 17, 15, 13, 11, 8	Better GL support	CPU,PSU
JDK-8289336	19, 17, 15, 13, 11, 8	Better platform image support	CPU,PSU
JDK-8288516	19, 17, 15, 13, 11, 8, 7, 6	Enhance font creation	CPU,PSU
JDK-8286496	19, 17, 15, 13, 11, 8	Improve Thread labels	CPU,PSU
JDK-8286070	19, 17, 15, 13, 11	Improve UTF8 representation	CPU,PSU

OpenJDK Bug Fixes

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

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8293598	19, 17, 15, 13, 11, 8, 7, 6	Enhance InetAddress address handling	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8293554	19, 17, 15, 13, 11, 8, 7, 6	Enhanced DH Key Exchanges	CPU,PSU
JDK-8295173	19, 17, 15, 13, 11, 8, 7, 6	(tz) Update Timezone Data to 2022e	CPU,PSU
JDK-8297804	19, 17, 15, 13, 11, 8, 7, 6	(tz) Update Timezone Data to 2022g	CPU,PSU
JDK-8294357	19, 17, 15, 13, 11, 8, 7, 6	(tz) Update Timezone Data to 2022d	CPU,PSU
JDK-8287411	19, 17, 15, 13, 11	Enhance DTLS performance	CPU,PSU
JDK-8283277	8, 7	ISO 4217 Amendment 171 Update	CPU,PSU
JDK-8286496	19, 17, 15, 13, 11, 8	Improve Thread labels	CPU,PSU
JDK-8285021	8, 7, 6	Improve CORBA communication	CPU,PSU
JDK-8294307	19, 17, 15, 13, 11, 8, 7	ISO 4217 Amendment 173 Update	CPU,PSU
JDK-8293742	19, 17, 15, 13, 11, 8, 7, 6	Better Banking of Sounds	CPU,PSU
JDK-8288516	19, 17, 15, 13, 11, 8, 7, 6	Enhance font creation	CPU,PSU
JDK-8293734	19, 17, 15, 13, 11, 8, 7, 6	Improve BMP image handling	CPU,PSU
JDK-8293717	19, 17, 15, 13, 11, 8, 7, 6	Objective view of ObjectView	CPU,PSU
JDK-8296239	19, 17, 15, 13, 11, 8, 7	ISO 4217 Amendment 174 Update	CPU,PSU
JDK-8289549	8, 7	ISO 4217 Amendment 172 Update	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8286070	19, 17, 15, 13, 11	Improve UTF8 representation	CPU,PSU
JDK-8296108	19, 17, 15, 13, 11, 8, 7, 6	(tz) Update Timezone Data to 2022f	CPU,PSU
JDK-8296715	19, 17, 15, 13, 11, 8	CLDR v42 update for tzdata 2022f	CPU,PSU
JDK-8289350	17, 15, 13, 11, 8, 7, 6	Better media supports	CPU,PSU
JDK-8295723	19, 17, 15, 13, 11, 8, 7, 6	security/infra/wycheproof/RunWycheproof.java fails with Assertion Error	CPU,PSU
JDK-8295687	19, 17, 15, 13, 11, 8, 7, 6	Better BMP bounds	CPU,PSU
JDK-8296771	19	RISC-V: C2: assert(false) failed: bad AD file	PSU
JDK-8296733	19, 17	JFR: File Read event for RandomAccessFile::write(byte[]) is incorrect	PSU
JDK-8296632	19, 17, 11	Write a test to verify the content change of TextArea sends TextEvent	PSU
JDK-8296602	19	RISC-V: improve performance of copy_memory stub	PSU
JDK-8296496	19, 17, 15, 13, 11	Overzealous check in sizecalc.h prevents large memory allocation	PSU
JDK-8296485	19, 17, 11	BuildEEBasicConstraints.java test fails with SunCertPathBuilderException	PSU
JDK-8296480	19, 17, 15, 13, 11	java/security/cert/pkix/policyChanges/TestPolicy.java is failing	PSU
JDK-8296463	19	Memory leak in JVM_StartThread with the integration of Virtual threads	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8296448	19	RISC-V: Fix temp usages of heapbase register killed by MacroAssembler::en/decode_klass_not_null	PSU
JDK-8296083	19, 17	javax/swing/JTree/6263446/bug6263446.java fails intermittently on a VM	PSU
JDK-8295952	17, 11	Problemlist existing compiler/rtm tests also on x86	PSU
JDK-8295926	19	RISC-V: C1: Fix LIRGenerator::do_LibmIntrinsic	PSU
JDK-8295915	8	Problemlist compiler/rtm failures specific to 8u	PSU
JDK-8295872	17, 11	[PPC64] JfrGetCallTrace: Need pc == nullptr check before frame constructor	PSU
JDK-8295554	19, 17, 15, 13, 11	Move the "sizecalc.h" to the correct location	PSU
JDK-8295530	15, 13	Update Zlib Data Compression Library to Version 1.2.13	PSU
JDK-8295469	19, 17, 11	S390X: Optimized builds are broken	PSU
JDK-8295429	17, 15, 13, 11	Update harfbuzz md file	PSU
JDK-8295419	17	JFR: Change name of jdk.JitRestart	PSU
JDK-8295414	19	[Aarch64] C2: assert(false) failed: bad AD file	PSU
JDK-8295412	17	support latest VS2022 MSC_VER in abstract_vm_version.cpp	PSU
JDK-8295405	17	Add cause in a couple of IllegalArgumentException and InvalidParameterException shown by sun/security/pkcs11 tests	PSU
JDK-8295322	11	Tests for JDK-8271459 were not backported to 11u	PSU
JDK-8295288	17, 11, 8	Some vm_flags tests associate with a wrong BugID	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8295268	19	Optimized builds are broken due to incorrect assert_is_rfp shortcuts	PSU
JDK-8295264	19	Fix PaX check on RISC-V	PSU
JDK-8295164	8	JDK 8 jdi tests should not use tasklist command on Windows	PSU
JDK-8294840	19, 17	langtools OptionalDependencyTest.java use File.pathSeparator	PSU
JDK-8294837	17	unify Windows 2019 version check in os_windows and java_props_md	PSU
JDK-8294755	19	Update milestone to ea for 19.0.2	PSU
JDK-8294740	17, 11	Add cgroups keyword to TestDockerBasic.java	PSU
JDK-8294602	19	Change milestone to fcs for releases: jdk-11.0.18, jdk-17.0.6, jdk-19.0.2	PSU
JDK-8294578	17, 11	[PPC64] C2: Missing is_oop information when using disjoint compressed oops mode	PSU
JDK-8294538	19	missing is_unloading() check in SharedRuntime::fixup_callers_callsite()	PSU
JDK-8293998	17, 11	[PPC64] JfrGetCallTrace: assert(_pc != nullptr) failed: must have PC	PSU
JDK-8293996	19	C2: fix and simplify IdealLoopTree::do_remove_empty_loop	PSU
JDK-8293891	17	gc/g1/mixedgc/TestOldGenCollectionUsage.java (still) assumes that GCs take 1ms minimum	PSU
JDK-8293834	19, 17, 11	Update CLDR data following tzdata 2022c update	PSU
JDK-8293828	17, 11, 8	JFR: jfr/event/oldobject/TestClassLoaderLeak.java still fails when GC cycles are not happening	PSU
JDK-8293826	11	Closed test fails after JDK-8276108 on aarch64	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8293816	19, 17, 15, 13, 11	Cl: ciBytecodeStream::get_klass() is not consistent	PSU
JDK-8293815	17	P11PSSSignature.engineUpdate should not print debug messages during normal operation	PSU
JDK-8293808	17	mscapi destroyKeyContainer enhance KeyStoreException: Access is denied exception	PSU
JDK-8293701	19, 17, 15, 13	jdeps InverseDepsAnalyzer runs into NoSuchElementException: No value present	PSU
JDK-8293672	17, 15, 13, 11	Update freetype md file	PSU
JDK-8293659	17	Improve UnsatisfiedLinkError error message to include dlopen error details	PSU
JDK-8293657	17	sun/management/jmxremote/bootstrap/RmiBootstrapTest.java#id1 failed with "SSLHandshakeException: Remote host terminated the handshake"	PSU
JDK-8293578	19, 17, 11	Duplicate ldc generated by javac	PSU
JDK-8293540	17, 11	[Metrics] Incorrectly detected resource limits with additional cgroup fs mounts	PSU
JDK-8293535	17	jdk/javadoc/doclet/testJavaFX/TestJavaFxMode.java fail with jfx	PSU
JDK-8293489	17	Accept CAs with BasicConstraints without pathLenConstraint	PSU
JDK-8293472	17, 11	Incorrect container resource limit detection if manual cgroup fs mounts present	PSU
JDK-8293461	8	Add a test for JDK-8290832	PSU
JDK-8293429	11	[11u] minor update in attribute style	PSU
JDK-8293348	19	A false cyclic inheritance error reported	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8293319	17	[C2 cleanup] Remove unused other_path arg in Parse::adjust_map_after_if	PSU
JDK-8293232	17	Fix race condition in pkcs11 SessionManager	PSU
JDK-8293100	19	RISC-V: Need to save and restore callee-saved FloatRegisters in StubGenerator::generate_call_stub	PSU
JDK-8293044	19, 17, 15, 13, 11	C1: Missing access check on non-accessible class	PSU
JDK-8293010	17	JDI ObjectReference/referringObjects/referringObjects 001 fails: assert(env.is_enabled(JVMTI_EVENT_OBJECT_FREE)) failed: checking	PSU
JDK-8292969	19	Bad Thread Utilization in ForkJoinPool	PSU
JDK-8292903	17	enhance round_up_power_of_2 assertion output	PSU
JDK-8292899	19, 17, 11	CustomTzIDCheckDST.java testcase failed on AIX platform	PSU
JDK-8292880	17	Improve debuggee logging for com/sun/jdi/ClassUnloadEventTest.java	PSU
JDK-8292879	17	com/sun/jdi/ClassUnloadEventTest.java failed due to classes not unloading	PSU
JDK-8292866	17, 11	Java_sun_awt_shell_Win32ShellFolder2_getLinkLocation check MultiByteToWideChar return value for failures	PSU
JDK-8292780	19	misc tests failed "assert(false) failed: graph should be schedulable"	PSU
JDK-8292778	17, 11	EncodingSupport_md.c convertUtf8ToPlatformString wrong placing of free	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8292756	19	java.lang.AssertionError at at jdk.compiler/com.sun.tools.javac.code.Scope\$ScopeImpl.leave(Scope.java:386)	PSU
JDK-8292695	19, 17	SIGQUIT and jcmd attaching mechanism does not work with signal chaining library	PSU
JDK-8292682	17, 11	Code change of JDK-8282730 not updated to reflect CSR update	PSU
JDK-8292586	17	simplify cleanups in NTLMAuthSequence getCredentialsHandle	PSU
JDK-8292579	17, 15, 13, 11, 8	(tz) Update Timezone Data to 2022c	PSU
JDK-8292541	17, 11	[Metrics] Reported memory limit may exceed physical machine memory	PSU
JDK-8292385	19, 17	assert(ctrl == kit.control()) failed: Control flow was added although the intrinsic bailed out	PSU
JDK-8292159	19	TYPE_USE annotations on generic type arguments of record components discarded	PSU
JDK-8292158	19, 17, 15, 11	AES-CTR cipher state corruption with AVX-512	PSU
JDK-8292083	17, 11	Detected container memory limit may exceed physical machine memory	PSU
JDK-8291775	19, 17	C2: assert(r != __null && r.is_Region()) failed: this phi must have a region	PSU
JDK-8291650	17	Add delay to ClassUnloadEventTest before exiting to give time for JVM to send all events before VMDeath	PSU
JDK-8291633	19	Build failures with GCC 11, Alpine 3 due to incompatible casts from nullptr	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8291599	19, 17	Assertion in PhaseldealLoop::skeleton_predicate_has_opaque after JDK-8289127	PSU
JDK-8291508	19	Fix some tests with "requires vm.jvmti & vm.continuations"	PSU
JDK-8291461	11	assert(false) failed: bad AD file	PSU
JDK-8291459	17, 11	JVM crash with GenerateOopMap::error_work(char const*, __va_list_tag*)	PSU
JDK-8291456	17	com/sun/jdi/ClassUnloadEventTest.java failed with: Wrong number of class unload events: expected 10 got 4	PSU
JDK-8290974	19	Bump version numbers for January 2023 CPU	PSU
JDK-8290964	19	C2 compilation fails with assert "non-reduction loop contains reduction nodes"	PSU
JDK-8290920	17	sspi_bridge.dll not built if BUILD_CRYPT0 is false	PSU
JDK-8290908	17	misc tests fail: assert(!thread_owns_locks()) failed: must release all locks when leaving VM	PSU
JDK-8290900	19	Build failure with Clang 14+ due to function warning attribute	PSU
JDK-8290839	17	jdk/jfr/event/compiler/TestJitRestart.java failed with "RuntimeException: No JIT restart event found: expected true, was false"	PSU
JDK-8290781	19, 17, 11	Segfault at PhaseldealLoop::clone_loop_handle_data_uses	PSU
JDK-8290711	19, 17, 11	assert(false) failed: infinite loop in PhaselterGVN::optimize	PSU
JDK-8290705	19, 17, 11	StringConcat::validate_mem_flow asserts with "unexpected user: StoreI"	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8290694	19	Update the release date after forking Oct CPU22_10	PSU
JDK-8290687	17	serviceability/sa/TestClassDump.java could leave files owned by root on macOS	PSU
JDK-8290547	17, 15, 13, 11	Update font handling	PSU
JDK-8290540	17, 15, 13, 11, 8	Freer typing of fonts	PSU
JDK-8290532	17	Adjust PKCS11Exception and handle more PKCS11 error codes	PSU
JDK-8290529	19, 17, 11	C2: assert(BoolTest(btest).is_canonical()) failure	PSU
JDK-8290496	19	riscv: Fix build warnings-as-errors with GCC 11	PSU
JDK-8290451	19, 17, 15, 13, 11	Incorrect result when switching to C2 OSR compilation from C1	PSU
JDK-8290374	17	Shenandoah: Remove inaccurate comment on SBS::load_reference_barrier()	PSU
JDK-8290334	17, 15, 13, 11	Update FreeType to 2.12.1	PSU
JDK-8290246	19	test fails "assert(init != __null) failed: initialization not found"	PSU
JDK-8290209	17, 11	jcup.md missing additional text	PSU
JDK-8290207	17, 11	Missing notice in dom.md	PSU
JDK-8290164	19	compiler/runtime/TestConstantsInError.java fails on riscv	PSU
JDK-8289853	17, 15, 13, 11	Update HarfBuzz to 4.4.1	PSU
JDK-8289562	17	Change bugs.java.com and bugreport.java.com URL's to https	PSU
JDK-8289559	17	java/awt/a11y/AccessibleJPopupMenuTest.java test fails with java.lang.NullPointerException	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8289524	17	Add JFR JIT restart event	PSU
JDK-8289366	17, 15, 13, 11	Improve HTTP/1.1 client usage	PSU
JDK-8289301	17	P11Cipher should not throw out of bounds exception during padding	PSU
JDK-8289257	17	Some custom loader tests failed due to symbol refcount not decremented	PSU
JDK-8289146	17, 11	containers/docker/TestMemoryWithCgroupV1.java fails on linux ppc64le machine with missing Memory and Swap Limit output	PSU
JDK-8289043	11	C2: Vector constant materialization attempt	PSU
JDK-8288992	19	AArch64: CMN should be handled the same way as CMP	PSU
JDK-8288985	11	P11TlsKeyMaterialGenerator should work with ChaCha20-Poly1305	PSU
JDK-8288928	8	Incorrect GPL header in pnglibconf.h (backport of JDK-8185041)	PSU
JDK-8288651	17	CDS test HelloUnload.java should not use literal string as ClassLoader name	PSU
JDK-8288599	11	com/sun/management/OperatingSystemMXBean/TestTotalSwap.java: Expected total swap size ... but getTotalSwapSpaceSize returned ...	PSU
JDK-8288508	17, 15, 13, 11, 8	Enhance ECDSA usage	PSU
JDK-8288445	17, 11	AArch64: C2 compilation fails with guarantee(!true (true && (shift != 0))) failed: impossible encoding	PSU
JDK-8288377	19, 17, 11	[REDO] DST not applying properly with zone id offset set with TZ env variable	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8288302	17, 11	Shenandoah: SIGSEGV in vm maybe related to jit compiling xerces	PSU
JDK-8288132	19, 17, 11	Update test artifacts in QuoVadis CA interop tests	PSU
JDK-8287917	11	System.loadLibrary does not work on Big Sur if JDK is built with macOS SDK 10.15 and earlier	PSU
JDK-8287902	11	UnreadableRB case in MissingResourceCauseTest is not working reliably on Windows	PSU
JDK-8287896	11	PropertiesTest.sh fail on msys2	PSU
JDK-8287895	11	Some langtools tests fail on msys2	PSU
JDK-8287826	17, 11	javax/accessibility/4702233/AccessiblePropertiesTest.java fails to compile	PSU
JDK-8287740	17	NSAccessibilityShowMenuAction not working for text editors	PSU
JDK-8287609	17, 11	macOS: SIGSEGV at [CoreFoundation] CFArrayGetCount / sun.font.CFont.getTableBytesNative	PSU
JDK-8287446	17, 15, 13, 11	Enhance icon presentations	PSU
JDK-8287425	17, 11	Remove unnecessary register push for MacroAssembler::check_klass_subtype_slow_path	PSU
JDK-8287349	17	AArch64: Merge LDR instructions to improve C1 OSR performance	PSU
JDK-8287217	19	C2: PhaseCCP: remove not visited nodes, prevent type inconsistency	PSU
JDK-8287180	15, 13	Update IANA Language Subtag Registry to Version 2022-08-08	PSU
JDK-8287091	11	aarch64 : guarantee(val < (1ULL << nbits)) failed: Field too big for insn	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8287076	17, 15, 13, 11	Document.normalizeDocument() produces different results	PSU
JDK-8287011	17	Improve container information	PSU
JDK-8286918	19, 17, 15, 13, 11, 8	Better HttpServer service	PSU
JDK-8286910	17, 15, 13, 11, 8	Improve JNDI lookups	PSU
JDK-8286872	17, 11	Refactor add/modify notification icon (TrayIcon)	PSU
JDK-8286772	17, 11	java/awt/dnd/DropTargetInInternalFrameTest/DropTargetInInternalFrameTest.html times out and fails in Windows	PSU
JDK-8286663	17, 11	Resolve IDE warnings in WTrayIconPeer and SystemTray	PSU
JDK-8286624	19, 17, 11	Regression Test CoordinateTruncationBug.java fails on OL8.3	PSU
JDK-8286582	8	Build fails on macos aarch64 when using --with-zlib=bundled	PSU
JDK-8286551	17	JDK-8286460 causes tests to fail to compile in Tier2	PSU
JDK-8286533	15, 13, 11, 8	Key X509 usages	PSU
JDK-8286526	17, 15, 13, 11, 8	Improve NTLM support	PSU
JDK-8286519	17, 15, 13, 11, 8	Better memory handling	PSU
JDK-8286511	17, 15, 13, 11, 8	Improve macro allocation	PSU
JDK-8286460	17	Remove dependence on JAR filename in CDS tests	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8286452	17	The array length of testSmallConstArray should be small and const	PSU
JDK-8286314	19	Trampoline not created for far runtime targets outside small CodeCache	PSU
JDK-8286313	17	[macos] Voice over reads the boolean value as null in the JTable	PSU
JDK-8286263	17	compiler/c1/TestPinnedIntrinsics.java failed with "RuntimeException: testCurrentTimeMillis failed with -3"	PSU
JDK-8286172	17	Create an automated test for JDK-4516019	PSU
JDK-8286077	17, 15, 13, 11	Wider MultiByte conversions	PSU
JDK-8285921	11	serviceability/dcmd/jvmti/AttachFailed/AttachReturnError.java fails on Alpine	PSU
JDK-8285836	17, 11	sun/net/www/http/KeepAliveCache/KeepAliveProperty.java failed with "RuntimeException: Failed in server"	PSU
JDK-8285835	19	SIGSEGV in PhaseldealLoop::build_loop_late_post_work	PSU
JDK-8285794	17, 11	AsyncGetCallTrace might acquire a lock via JavaThread::thread_from_jni_environment	PSU
JDK-8285698	17, 11	Create a test to check the focus stealing of JPopupMenu from JComboBox	PSU
JDK-8285687	17	Remove jtreg tag manual=yesno for java/awt/print/PrinterJob/PageRangesDlgTest.java	PSU
JDK-8285662	17, 15, 13, 11, 8	Better permission resolution	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8285617	11	Fix java/awt/print/PrinterJob/ImagePrinting/PrintARG BImage.java manual test	PSU
JDK-8285612	17	Remove jtreg tag manual=yesno for java/awt/print/PrinterJob/ImagePrinting/ClippedI mages.java	PSU
JDK-8285604	19, 17, 11	closed sun/java2d/GdiRendering/ClipShapeRendering.jav a failed with "Incorrect color ffeeeeee instead of ff0000ff in pixel (100, 100)"	PSU
JDK-8285373	17, 11	Create an automated test for JDK-4702233	PSU
JDK-8285305	17, 11	Create an automated test for JDK-4495286	PSU
JDK-8284980	17	Test vmTestbase/nsk/stress/except/except010.java times out with -Xcomp -XX:+DeoptimizeALot	PSU
JDK-8284977	11	MetricsTesterCgroupV2.getLongValueEntryFromFil e fails when named value doesn't exist	PSU
JDK-8284892	17	java/net/httpclient/http2/TLSConnection.java fails intermittently	PSU
JDK-8284884	11	Replace polling with waiting in javax/swing/text/html/parser/Parser/8078268/bu g8078268.java	PSU
JDK-8284771	17, 11	java/util/zip/CloseInflaterDeflaterTest.java failed with "AssertionError: Expected IOException to be thrown, but nothing was thrown"	PSU
JDK-8284752	17, 11	Zero does not build on Mac OS X due to missing os::current_thread_enable_wx implementation	PSU
JDK-8284732	17, 11	FFI_GO_CLOSURES macro not defined but required for zero build on Mac OS X	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8284690	17, 15, 11	[macos] VoiceOver : Getting java.lang.IllegalArgumentException: Invalid location on Editable JComboBox	PSU
JDK-8284681	17	compiler/c2/aarch64/TestFarJump.java fails with "RuntimeException: for CodeHeap < 250MB the far jump is expected to be encoded with a single branch instruction"	PSU
JDK-8284533	17	Improve InterpreterCodelet data footprint	PSU
JDK-8284521	11	Write an automated regression test for RFE 4371575	PSU
JDK-8284358	11	Unreachable loop is not removed from C2 IR, leading to a broken graph	PSU
JDK-8284294	11	Create an automated regression test for RFE 4138746	PSU
JDK-8283903	8	GetContainerCpuLoad does not return the correct result in share mode	PSU
JDK-8283422	11	Create a new test for JDK-8254790	PSU
JDK-8283383	17	[macos] a11y : Screen magnifier shows extra characters (0) at the end JButton accessibility name	PSU
JDK-8283353	17	compiler/c2/cr6865031/Test.java and compiler/runtime/Test6826736.java fails on x86_32	PSU
JDK-8283337	17	Posix signal handler modification warning triggering incorrectly	PSU
JDK-8283298	17	Make CodeCacheSegmentSize a product flag	PSU
JDK-8283199	17, 11	Linux os::cpu_microcode_revision() stalls cold startup	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8283059	17, 15, 13	Uninitialized warning in check_code.c with GCC 11.2	PSU
JDK-8282937	11	Write a regression test for JDK-4820080	PSU
JDK-8282936	11	Write a regression test for JDK-4615365	PSU
JDK-8282857	17, 11	Create a regression test for JDK-4702690	PSU
JDK-8282778	11	Create a regression test for JDK-4699544	PSU
JDK-8282777	17, 11	Create a Regression test for JDK-4515031	PSU
JDK-8282730	17, 11	LdapLoginModule throw NPE from logout method after login failure	PSU
JDK-8282642	17, 11	vmTestbase/gc/gctests/LoadUnloadGC2/LoadUnloadGC2.java fails intermittently with exit code 1	PSU
JDK-8282640	11	Create a test for JDK-4740761	PSU
JDK-8282600	17	SSLSocketImpl should not use user_canceled workaround when not necessary	PSU
JDK-8282528	17	AArch64: Incorrect replicate2L_zero rule	PSU
JDK-8282511	17	Use fixed certificate validation date in SSLExampleCert template	PSU
JDK-8282402	17, 11	Create a regression test for JDK-4666101	PSU
JDK-8282398	17	EndingDotHostname.java test fails because SSL cert expired	PSU
JDK-8282347	17	AARCH64: Untaken branch in has_negatives stub	PSU
JDK-8282345	11	handle latest VS2022 in abstract_vm_version	PSU
JDK-8282306	11	os::is_first_C_frame(frame*) crashes on invalid link access	PSU
JDK-8282276	17, 11	Problem list failing two Robot Screen Capture tests	PSU

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JDK-8282252	17, 15, 13, 11, 8	Improve BigInteger/Decimal validation	PSU
JDK-8282049	17	AArch64: Use ZR for integer zero immediate volatile stores	PSU
JDK-8282046	11	Create a regression test for JDK-8000326	PSU
JDK-8281744	17	x86: Use short jumps in TIG::set_vtos_entry_points	PSU
JDK-8281297	11	TestStressG1Humongous fails with guarantee(is_range_uncommitted)	PSU
JDK-8281296	17, 11	Create a regression test for JDK-4515999	PSU
JDK-8281183	11	RandomGenerator:NextDouble() default behavior partially fixed by JDK-8280950	PSU
JDK-8280950	11	RandomGenerator:NextDouble() default behavior non conformant after JDK-8280550 fix	PSU
JDK-8280948	17, 11	Write a regression test for JDK-4659800	PSU
JDK-8280890	17, 11, 8	Cannot use '-Djava.system.class.loader' with class loader in signed JAR	PSU
JDK-8280872	17	Reorder code cache segments to improve code density	PSU
JDK-8280555	17	serviceability/sa/TestObjectMonitorIterate.java is failing due to ObjectMonitor referencing a null Object	PSU
JDK-8280554	17	resourcehogs/serviceability/sa/ClhsdbRegionDetailsScanOopsForG1.java can fail if GC is triggered	PSU
JDK-8280550	11	SplittableRandom#nextDouble(double,double) can return result >= bound	PSU
JDK-8280511	17	AArch64: Combine shift and negate to a single instruction	PSU
JDK-8280391	17	NMT: Correct NMT tag on CollectedHeap	PSU

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JDK-8280234	17	AArch64 "core" variant does not build after JDK-8270947	PSU
JDK-8280158	11	New test from JDK-8274736 failed with/without patch in JDK11u	PSU
JDK-8280124	17	Reduce branches decoding latin-1 chars from UTF-8 encoded bytes	PSU
JDK-8280016	17	gc/g1/TestShrinkAuxiliaryData30 test fails on large machines	PSU
JDK-8279941	19, 17	sun/security/pkcs11/Signature/TestDSAKeyLength.java fails when NSS version detection fails	PSU
JDK-8279695	11	[TESTBUG] modify compiler/loopopts/TestSkeletonPredicateNegation.java to run on C1 also	PSU
JDK-8279662	17	serviceability/sa/ClhsdbScanOops.java can fail due to unexpected GC	PSU
JDK-8279536	17	jdk/nio/zipfs/ZipFSOutputStreamTest.java timed out	PSU
JDK-8279398	17	jdk/jfr/api/recording/time/TestTimeMultiple.java failed with "RuntimeException: getStopTime() > afterStop"	PSU
JDK-8279066	17, 11	entries.remove(entry) is useless in PKCS12KeyStore	PSU
JDK-8278826	17	Print error if Shenandoah flags are empty (instead of crashing)	PSU
JDK-8277970	19, 17, 11	Test jdk/sun/security/ssl/SSLSessionImpl/NoInvalidateSocketException.java fails with "tag mismatch"	PSU
JDK-8277928	17	Fix compilation on macosx-aarch64 after 8276108	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8277881	17, 15, 13, 11	Missing SessionID in TLS1.3 resumption in compatibility mode	PSU
JDK-8277866	17	gc/epsilon/TestMemoryMXBeans.java failed with wrong initial heap size	PSU
JDK-8277578	17	ProblemList applications/jcstress/acqrel.java on linux-aarch64	PSU
JDK-8277577	17	ProblemList compiler/onSpinWait/TestOnSpinWaitAArch64DefaultFlags.java on linux-aarch64	PSU
JDK-8277576	17	ProblemList runtime/ErrorHandling/CreateCoredumpOnCrash.java on macosx-X64	PSU
JDK-8277497	11	Last column cell in the JTable row is read as empty cell	PSU
JDK-8277411	17	C2 fast_unlock intrinsic on AArch64 has unnecessary ownership check	PSU
JDK-8277358	17	Accelerate CRC32-C	PSU
JDK-8277351	17	ProblemList runtime/jni/checked/TestPrimitiveArrayCriticalWithBadParam.java on macosx-x64	PSU
JDK-8277346	17	ProblemList 7 serviceability/sa tests on macosx-x64	PSU
JDK-8277159	11	Fix java/nio/file/FileStore/Basic.java test by ignoring /run/user/* mount points	PSU
JDK-8277092	17	TestMetaspaceAllocationMT2.java#ndebug-default fails with "RuntimeException: Committed seems high: NNNN expected at most MMMM"	PSU
JDK-8276904	17	Optional.toString() is unnecessarily expensive	PSU
JDK-8276108	17	Wrong instruction generation in aarch64 backend	PSU

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JDK-8275887	8	jarsigner prints invalid digest/signature algorithm warnings if keysize is weak/disabled	PSU
JDK-8275535	17, 11	Retrying a failed authentication on multiple LDAP servers can lead to users blocked	PSU
JDK-8275234	17	java/awt/GraphicsDevice/DisplayModes/CycleDMI mage.java is entered twice in ProblemList	PSU
JDK-8275170	17, 11	Some jtreg sound tests should be marked with sound keyword	PSU
JDK-8274903	17	Zero: Support AsyncGetCallTrace	PSU
JDK-8274840	8	Update OS detection code to recognize Windows 11	PSU
JDK-8274658	7	ISO 4217 Amendment 170 Update	PSU
JDK-8274597	11	Some of the dnd tests time out and fail intermittently	PSU
JDK-8274563	17, 11, 8	jfr/event/oldobject/TestClassLoaderLeak.java fails when GC cycles are not happening	PSU
JDK-8274527	17	Minimal VM build fails after JDK-8273459	PSU
JDK-8274456	17, 11	Remove jtreg tag manual=yesno java/awt/print/PrinterJob/PageDialogTest.java	PSU
JDK-8274296	17, 11	Update or Problem List tests which may fail with uiScale=2 on macOS	PSU
JDK-8274160	17	java/awt/Window/ShapedAndTranslucentWindows /Common.java delay is too high	PSU
JDK-8274032	17, 11	Remove jtreg tag manual=yesno for java/awt/print/PrinterJob/ImagePrinting/ImageTypes.java & show test UI	PSU
JDK-8274029	17, 11	Remove jtreg tag manual=yesno for java/awt/print/Dialog/DialogOrient.java	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8273894	15, 13	ConcurrentModificationException raised every time ReferralsCache drops referral	PSU
JDK-8273881	17	Metaspace: test repeated deallocations	PSU
JDK-8273880	17	Zero: Print warnings when unsupported intrinsics are enabled	PSU
JDK-8273685	17, 11	Remove jtreg tag manual=yesno for java/awt/Graphics/LCDTextAndGraphicsState.java & show test instruction	PSU
JDK-8273578	17, 11	javax/swing/JMenu/4515762/bug4515762.java fails on macOS 12	PSU
JDK-8273553	17, 15, 11	sun.security.ssl.SSLEngineImpl.closeInbound also has similar error of JDK-8253368	PSU
JDK-8273459	17	Update code segment alignment to 64 bytes	PSU
JDK-8273380	17	ARM32: Default to {ldrex,strexd} in StubRoutines::atomic_{load store}_long	PSU
JDK-8273236	17, 11	keytool does not accurately warn about algorithms that are disabled but have additional constraints	PSU
JDK-8273108	17	RunThese24H crashes with SEGV in markWord::displaced_mark_helper() after JDK-8268276	PSU
JDK-8273043	17	[TEST_BUG] Automate NimbusJTreeSelTextColor.java	PSU
JDK-8272809	17	JFR thread sampler SI_KERNEL SEGV in metaspace::VirtualSpaceList::contains	PSU
JDK-8272791	17	java -XX:BlockZeroingLowLimit=1 crashes after 8270947	PSU
JDK-8272776	17	NullPointerException not reported	PSU

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JDK-8272608	17	java_lang_System::allow_security_manager() doesn't set its initialization flag	PSU
JDK-8272123	17, 11	Problem list 4 jtreg tests which regularly fail on macos-aarch64	PSU
JDK-8272094	17	compiler/codecache/TestStressCodeBuffers.java crashes with "failed to allocate space for trampoline"	PSU
JDK-8271956	17	AArch64: C1 build failed after JDK-8270947	PSU
JDK-8271834	17	TestStringDeduplicationAgeThreshold intermittent failures on Shenandoah	PSU
JDK-8271459	8	C2: Missing NegativeArraySizeException when creating StringBuilder with negative capacity	PSU
JDK-8271015	17	Split cds/SharedBaseAddress.java test into smaller parts	PSU
JDK-8270947	17	AArch64: C1: use zero_words to initialize all objects	PSU
JDK-8270848	17	Redundant unsafe opmask register allocation in some instruction patterns.	PSU
JDK-8270609	17	[TESTBUG] java/awt/print/Dialog/DialogCopies.java does not show instruction	PSU
JDK-8270344	15, 13, 8	Session resumption errors	PSU
JDK-8270155	17	ARM32: Improve register dump in hs_err	PSU
JDK-8270086	17	ARM32-softfp: Do not load CONSTANT_double using the condy helper methods in the interpreter	PSU
JDK-8269873	11	serviceability/sa/CIhsdb tests are using a C2 specific VMStruct field	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8269850	8	Most JDK releases report macOS version 12 as 10.16 instead of 12.0	PSU
JDK-8269743	17	test/hotspot/jtreg/vmTestbase/vm/mlvm/meth/stress/jni/nativeAndMH/Test.java crash with small heap (-Xmx50m)	PSU
JDK-8269571	17	NMT should print total malloc bytes and invocation count	PSU
JDK-8269404	17	Base64 Encoding optimization enhancements for x86 using AVX-512	PSU
JDK-8269039	8	Disable SHA-1 Signed JARs	PSU
JDK-8269029	17, 11	compiler/codegen/TestCharVect2.java fails for client VMs	PSU
JDK-8268893	11	jcmm to trim the glibc heap	PSU
JDK-8268779	17	ZGC: runtime/InternalApi/ThreadCpuTimesDeadlock.java#id1 failed with "OutOfMemoryError: Java heap space"	PSU
JDK-8268361	11	Fix the infinite loop in next_line	PSU
JDK-8268297	17	jdk/jfr/api/consumer/streaming/TestLatestEvent.java times out	PSU
JDK-8268288	17	jdk/jfr/api/consumer/streaming/TestOutOfProcessMigration.java fails with "Error: ShouldNotReachHere()"	PSU
JDK-8268276	17	Base64 Decoding optimization for x86 using AVX-512	PSU
JDK-8268033	17	compiler/intrinsics/bmi/verifycode/BzhiTestI2L.java fails with "fatal error: Not compilable at tier 3: CodeBuffer overflow"	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8267138	17	Stray suffix when starting gtests via GTestWrapper.java	PSU
JDK-8267038	15, 13	Update IANA Language Subtag Registry to Version 2022-03-02	PSU
JDK-8266967	11	debug.cpp utility find() should print Java Object fields.	PSU
JDK-8266519	17	Cleanup resolve() leftovers from BarrierSet et al	PSU
JDK-8266174	15, 13	-Wmisleading-indentation happens in libmllib_image sources	PSU
JDK-8266171	15, 13	-Warray-bounds happens in imageioJPEG.c	PSU
JDK-8266082	17, 11	AssertionError in Annotate.fromAnnotations with -Xdoclint	PSU
JDK-8265527	8	tools/javac/diags/CheckExamples.java fails after JDK-8078024 8u backport	PSU
JDK-8265489	17	Stress test times out because of long ObjectSynchronizer::monitors_iterate(...) operation	PSU
JDK-8264666	11	Change implementation of safeAdd/safeMult in the LCMSImageLayout class	PSU
JDK-8264593	11	debug.cpp utilities should be available in product builds.	PSU
JDK-8263871	11	On sem_destroy() failing we should assert	PSU
JDK-8263326	11	Remove ReceiverTypeData check from serviceability/sa/TestPrintMdo.java	PSU
JDK-8262721	17	Add Tests to verify single iteration loops are properly optimized	PSU
JDK-8261758	11	[TESTBUG] gc/g1/TestGCLogMessages.java fails if ergonomics detect too small InitialHeapSize	PSU
JDK-8261445	11	Use memory_order_relaxed for os::random().	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8261336	11	IGV: enhance default filters	PSU
JDK-8261279	15, 13	sun/util/resources/cldr/TimeZoneNamesTest.java timed out	PSU
JDK-8257722	17, 11	Improve "keytool -printcert -jarfile" output	PSU
JDK-8256811	17	Delayed/missed jdwp class unloading events	PSU
JDK-8256372	15, 13	[macos] Unexpected symbol was displayed on JTextField with Monospaced font	PSU
JDK-8256109	11	Create implementation for NSAccessibilityButton protocol	PSU
JDK-8255559	8	Leak File Descriptors Because of ResolverLocalFilesystem#engineResolveURI()	PSU
JDK-8255439	17, 11	System Tray icons get corrupted when Windows scaling changes	PSU
JDK-8254976	11	Re-enable swing jtreg tests which were broken due to samevm mode	PSU
JDK-8254874	11	ZGC: JNIHandleBlock verification failure in stack watermark processing	PSU
JDK-8253877	11	gc/g1/TestGCLogMessages.java fails - missing "Evacuation failure" message	PSU
JDK-8253702	8	BigSur version number reported as 10.16, should be 11.nn	PSU
JDK-8253368	15	TLS connection always receives close_notify exception	PSU
JDK-8252497	7	Incorrect numeric currency code for ROL	PSU
JDK-8251466	17	test/java/io/File/GetXSpace.java fails on Windows with mapped network drives.	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8249694	11	java/lang/StringBuffer/HugeCapacity.java and j/l/StringBuilder/HugeCapacity.java tests shouldn't be @ignore-d	PSU
JDK-8244670	17	convert chsdb "whatis" command from javascript to java	PSU
JDK-8244557	11	test/jdk/javax/swing/JTabbedPane/TestBackgroundScrollPolicy.java failed	PSU
JDK-8244010	11	Simplify usages of ProcessTools.createJavaProcessBuilder in our tests	PSU
JDK-8243568	11	serviceability/logging/TestLogRotation.java uses 'test.java.opts' and not 'test.vm.opts'	PSU
JDK-8243565	11	some gc tests use 'test.java.opts' and not 'test.vm.opts'	PSU
JDK-8242565	13	Policy initialization issues when the denyAfter constraint is enabled	PSU
JDK-8241086	8	Test runtime/NMT/HugeArenaTracking.java is failing on 32bit Windows	PSU
JDK-8240281	11	Remove failing assertion code when selecting first memory state in SuperWord::co_locate_pack	PSU
JDK-8233648	17, 11	[TESTBUG] DefaultMenuBarTest.java failing on macos	PSU
JDK-8233565	11	[TESTBUG] NullModalityDialogTest.java fails on MacOS	PSU
JDK-8233558	17, 11	[TESTBUG] WindowOwnedByEmbeddedFrameTest.java fails on macos	PSU
JDK-8233557	17, 11	[TESTBUG] DoubleClickTitleBarTest.java fails on macOs	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8233551	8	[TESTBUG] SelectEditTableCell.java fails on MacOS	PSU
JDK-8228672	11	[TESTBUG] gc/metaspac/TestIdSizeTransitions.java fails on 32-bit platforms	PSU
JDK-8227651	11	Tests fail with SSLProtocolException: Input record too big	PSU
JDK-8227179	11	Test for new gc+metaspac=info output format	PSU
JDK-8226236	11	win32: gc/metaspac/TestIdCapacityUntilGCWrapAround.java fails	PSU
JDK-8224506	8	[TESTBUG] TestDockerMemoryMetrics.java fails with exitValue = 137	PSU
JDK-8222323	17	ChildAlwaysOnTopTest.java fails with "RuntimeException: Failed to unset alwaysOnTop"	PSU
JDK-8222251	11	preflow visitor is not visiting lambda expressions	PSU
JDK-8222091	11	Javadoc does not handle package annotations correctly on package-info.java	PSU
JDK-8221529	8	[TESTBUG] Docker tests use old/deprecated image on AArch64	PSU
JDK-8215571	11	jdb does not include jdk.* in the default class filter	PSU
JDK-8212096	11	javax/net/ssl/ServerName/SSLExplorerMatchedSNI.java failed intermittently due to SSLException: Tag mismatch	PSU
JDK-8211002	11	test/jdk/java/lang/Math/PowTests.java skips testing for non-corner-case values	PSU
JDK-8210558	17	serviceability/sa/TestJhsdbJstackLock.java fails to find '^s+- waiting to lock <0x[0-9a-f]+> \ (a java.lang.Class ...'	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8210047	11	some pages contain content outside of landmark region	PSU
JDK-8206456	8	[TESTBUG] docker jtreg tests fail on systems without cpuset.effective_cpus / cpuset.effective_mems	PSU
JDK-8202836	17, 11	[macosx] test java/awt/Graphics/TextAAHintsTest.java fails	PSU
JDK-8200387	8	[Graal] fromTonga/nsk/jdi tests hang with Graal as JIT	PSU
JDK-8199290	11	[TESTBUG] sun.hotspot.WhiteBox\$WhiteBoxPermission is not copied	PSU
JDK-8198343	11	Test java/awt/print/PrinterJob/TestPgfmtSetMPA.java may fail w/o printer	PSU
JDK-8195607	8	sun/security/pkcs11/Secmod/TestNssDbSqlite.java failed with "NSS initialization failed" on NSS 3.34.1	PSU
JDK-8194126	11	Regression automated Test '/open/test/jdk/javax/swing/JColorChooser/Test7194184.java' fails	PSU
JDK-8193942	11	Regression automated test '/open/test/jdk/javax/swing/JFrame/8175301/ScaledFrameBackgroundTest.java' fails	PSU
JDK-8178698	19, 17, 11	javax/sound/midi/Sequencer/MetaCallback.java failed with timeout	PSU
JDK-8172269	11	When checking the default behaviour for a scroll tab layout and checking the 'opaque' checkbox, the area behind tabs is not red.	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8169187	17, 11	[macosx] Aqua: java/awt/image/multiresolution/MultiresolutionIconTest.java	PSU
JDK-8165943	8	LineBreakMeasurer does not measure correctly if TextAttribute.TRACKING is set.	PSU
JDK-8159720	8	Failure of C2 compilation with tiered prevents some C1 compilations	PSU
JDK-8159599	17, 11, 8	[TEST_BUG] java/awt/Modal/ModalInternalFrameTest/ModalInternalFrameTest.java	PSU
JDK-8149714	7, 6	[parfait] char array lengths don't match in awt_Font.cpp:1701	PSU
JDK-8148005	8	One byte may be corrupted by get_datetime_string()	PSU
JDK-8147862	8	Null check too late in sun.net.httpserver.ServerImpl	PSU
JDK-8129827	17, 11, 8	[TEST_BUG] Test java/awt/Robot/RobotWheelTest/RobotWheelTest.java fails	PSU
JDK-8079267	11	[TEST_BUG] Test java/awt/Frame/MiscUndecorated/RepaintTest.java fails	PSU
JDK-8079255	8	[TEST_BUG] [macosx] Test closed/java/awt/Robot/RobotWheelTest/RobotWheelTest fails for Mac only	PSU
JDK-8073464	8	GC workers do not have thread names	PSU
JDK-8071530	8	Update OS detection code to reflect Windows 10 version change	PSU
JDK-8067941	8	[TESTBUG] Fix tests for OS with 64K page size.	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8065422	17	Trailing dot in hostname causes TLS handshake to fail with SNI disabled	PSU
JDK-8054066	8	com/sun/jdi/DoubleAgentTest.java fails with timeout	PSU
JDK-8030121	17, 11	java/awt/dnd/MissingDragExitEventTest/MissingDragExitEventTest.java fails	PSU
JDK-8029633	19, 17, 11	Raw inner class constructor ref should not perform diamond inference	PSU
JDK-8028998	11	[TEST_BUG] [macosx] java/awt/dnd/DropTargetEnterExitTest/MissedDragExitTest.java failed	PSU
JDK-8028265	17, 15, 13, 11, 8	Add legacy tz tests to OpenJDK	PSU
JDK-8022403	19, 17, 11	sun/java2d/DirectX/OnScreenRenderingResizeTest/OnScreenRenderingResizeTest.java fails	PSU
JDK-7188098	17	TEST_BUG: closed/javax/sound/midi/Synthesizer/Receiver/bug6186488.java fails	PSU
JDK-7001973	17, 11	java/awt/Graphics2D/CopyAreaOOB.java fails	PSU
JDK-6885993	8	Named Thread: introduce print() and print_on(outputStream* st) methods	PSU
JDK-6829250	17, 11	Reg test: java/awt/Toolkit/ScreenInsetsTest/ScreenInsetsTest.java fails in Windows	PSU
JDK-6782021	11	It is not possible to read local computer certificates with the SunMSCAPI provider	PSU
JDK-8298737	11	8296772 backport to jdk11u caused build error on sparc	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-4819544	11	SwingSet2 JTable Demo throws NullPointerException	PSU
JDK-8297656	17, 11	AArch64: Enable AES/GCM Intrinsics	PSU
JDK-8297590	17	[TESTBUG] HotSpotResolvedJavaFieldTest does not run	PSU
JDK-8297530	17, 15, 13	java.lang.IllegalArgumentException: Negative length on strings concatenation	PSU
JDK-8297481	17, 11	Create a regression test for JDK-4424517	PSU
JDK-8297476	19	Increase InlineSmallCode default from 1000 to 2500 for RISC-V	PSU
JDK-8297451	19	ProcessHandleImpl should assert privilege when modifying reaper thread	PSU
JDK-8297309	19, 17	Memory leak in ShenandoahFullGC	PSU
JDK-8297241	19, 17, 11	Update sun/java2d/DirectX/OnScreenRenderingResizetest/OnScreenRenderingResizeTest.java	PSU
JDK-8297153	19, 17, 11	sun/java2d/DirectX/OnScreenRenderingResizetest/OnScreenRenderingResizeTest.java fails again	PSU
JDK-8297147	19, 17, 11	UnexpectedSourceImageSize test times out on slow machines when fastdebug is used	PSU
JDK-8297141	8	Fix hotspot/test/runtime/SharedArchiveFile/DefaultUseWithClient.java for 8u	PSU
JDK-8297027	15, 13	Fix broken aarch64 build of 13u/15u after bad backport of 8293044	PSU
JDK-8296970	19	Remove sysThreadAvailableStackWithSlack from hotspot-symbols	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8296967	17	[JVMCI] rationalize relationship between getCodeSize and getCode in ResolvedJavaMethod	PSU
JDK-8296961	17	[JVMCI] Access to j.l.r.Method/Constructor/Field for ResolvedJavaMethod/ResolvedJavaField	PSU
JDK-8296960	17	[JVMCI] list HotSpotConstantPool.loadReferencedType to ConstantPool	PSU
JDK-8296959	8	Fix hotspot shell tests of 8u on multilib systems	PSU
JDK-8296958	17	[JVMCI] add API for retrieving ConstantValue attributes	PSU
JDK-8296957	19, 17, 15, 13, 11	One more cast in SAFE_SIZE_NEW_ARRAY2	PSU
JDK-8296956	17	[JVMCI] HotSpotResolvedJavaFieldImpl.getIndex returns wrong value	PSU
JDK-8296945	19, 17	PublicMethodsTest is slow due to dependency verification with debug builds	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-8299628	19, 17, 15, 13, 11, 8	BMP top-down images fail to load after JDK-8289336	CPU,PSU
JDK-8289336	19, 17, 15, 13, 11, 8	Better platform image support	CPU,PSU
JDK-8292112	19, 17, 15, 13, 11, 8	Better DragView handling	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8248551	8	[TestBug] Ignore two failing FXML unit tests which use Nashorn script engine	CPU,PSU
JDK-8292105	19, 17, 15, 13, 11, 8	Improve Robot functionality	CPU,PSU
JDK-8292097	19, 17, 15, 13, 11, 8	Better video decoding	CPU,PSU
JDK-8294779	19, 17, 15, 13, 11, 8	Improve FX pages	CPU,PSU
JDK-8289343	19, 17, 15, 13, 11, 8	Better GL support	CPU,PSU
JDK-8289542	19, 17, 15, 13, 11, 8	Update JPEG Image Decoding Software to 9e	PSU
JDK-8289541	19, 17, 15, 13, 11, 8	Update ICU4C to 71.1	PSU
JDK-8284281	19, 17, 15, 13, 11, 8	[Accessibility] [Win] [Narrator] Exceptions with TextArea & TextField when deleted last char	PSU
JDK-8222210	19, 17, 15, 13, 11	JFXPanel popups open at wrong coordinates when using multiple hidpi monitors	PSU
JDK-8215894	8	Provide media support for libav version 58	PSU
JDK-8191446	8	[Linux] Build and deliver the libav media stubs for openjfx build	PSU
JDK-8087557	19, 17, 15, 13, 11, 8	[Win] [Accessibility, Dialogs] Alert Dialog content is not fully read by Screen Reader	PSU
JDK-8294400	19, 17, 15, 13, 11, 8	Provide media support for libavcodec version 59	PSU
JDK-8293971	8	Loading new Media from resources can sometimes fail when loading from FXML	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8293795	19, 17, 15, 13, 11, 8	[Accessibility] [Win] [Narrator] Exceptions When Deleting Text with Continuous Key Press in TextArea and TextField	PSU
JDK-8292549	19, 17, 15, 13, 11	GitHub actions: intermittent build failure on macOS while downloading ant	PSU
JDK-8291625	19, 17, 15, 13, 11	DialogPane without header nor headerText nor graphic node adds padding to the left of the content pane	PSU
JDK-8291087	19, 17, 15, 13, 11	Wrong position of focus of screen reader on Windows with screen scale > 1	PSU
JDK-8290527	19, 17, 15, 13, 11	Bump macOS GitHub actions to macOS 11	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-42269	17	builds for linux32 and win-aarch64 are broken after ZULU-39745	CPU,PSU
ZULU-43969	19, 17, 15, 13, 11, 8	jfx fails to load top-down bmp images	CPU,PSU
ZULU-43161	17	jdk/test/jaxp/javax/xml/jaxp/module/ServiceProviderTest/DefaultFactoryWrapperTest.java failed with "Unexpected exit from test [exit code: 1]"	CPU,PSU
ZULU-43972	17, 15, 13, 11	Update JFX to zulu19.0.1.0.101+102	CPU,PSU
ZULU-43112	19, 17, 15, 13, 11, 8, 7, 6	Update copyright year with 2023 in welcome.html for Jan cpu	CPU,PSU
ZULU-44100	8	Update JFX to zulu8u361-b02	CPU,PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-43437	8, 7, 6	Update release info	CPU,PSU
ZULU-43588	17, 11	add hsdis to Zulu	PSU
ZULU-43542	7	No links to azul.com in readme.txt and welcome.html for 7cpu (PM-311)	PSU
ZULU-43382	19, 17, 15, 13, 11	Update JFX to zulu19.0.2+100	PSU
ZULU-43119	8	Failed attach may confuse attaching thread	PSU
ZULU-43111	11	ShouldNotReachHere() after CrsFirstCallMessage::print_on()	PSU
ZULU-43110	17	notify_class_load should be configurable by CrsClassLoadMessage::should_notify()	PSU
ZULU-42843	8	Catch and avoid calling stale atforks	PSU
ZULU-42710	8	Clear few glibc 2.33 flags preventing unloading	PSU
ZULU-42696	8	Failure in vmTestbase/nsk/sysdict/vm/stress/chain/chain001/chain001.java, chain003.java, chain004.java - NoClassDefFoundError: nsk/sysdict/share/*	PSU
ZULU-42694	15, 13	Fix a jvmti crash in mac arm implementation	PSU
ZULU-42558	11	Zulu 11 Linux-Arm32 fails to build	PSU
ZULU-42546	11	build on solaris-sparc is broken after JDK-8282306	PSU
ZULU-42174	17, 11	Closed test fails after JDK-8276108 on aarch64	PSU
ZULU-41973	11	#define DEBUG 1 only: CrsMessage::print_on(): Wrong types casting	PSU
ZULU-41963	8	Remove OpenJSSE and Legacy8uJSSE from Zulu CA builds	PSU
ZULU-41890	17	Issue parsing option --custom-properties	PSU
ZULU-41780	8	Add zulu version to deunique	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-41777	8	Handle NODELETE after glibc 2.30	PSU
ZULU-41223	8	fix compilation issues for gcc7.5	PSU
ZULU-40966	17, 8	Fix 2 Address Sanitizer (ASAN) sscanf buffer overflows - any testcase	PSU
ZULU-40964	17	Processing of VM_METHOD_FIRST_CALLED at client side	PSU
ZULU-40939	8	Failure by timeout in vmTestbase/nsk/jdi/ReferenceType/instances/instances003/instances003.java	PSU
ZULU-40937	8	Add vendor info to the release file	PSU
ZULU-40762	17, 11, 8	Zulu fastdebug failed to start with CRS enabled	PSU
ZULU-40079	11	HarfBuzz breaks linux-arm32/64 builds	PSU
ZULU-40049	8	update external freetype to 2.12.1	PSU
ZULU-39745	17	Support custom security providers	PSU
ZULU-39280	11, 8	backout fix for JDK-8288763	PSU
ZULU-38740	11	Use system harfbuzz on Solaris	PSU
ZULU-38511	17, 11	All CRS modules should be loaded by boot class loader (again)	PSU
ZULU-38317	11	[REGRESSION] CPU test for JDK-8268506 started failing since 11.54	PSU
ZULU-38229	8	Use OpenJSSE and Legacy8uJSSE artifacts from nexus	PSU
ZULU-35819	11, 8	regression tests runtime/SelectionResolution/* failed: SIGSEGV	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-34602	8	Failure in vmTestbase/nsk/jdi/ReferenceType/instances/instances003/instances003.java - com.sun.jdi.ObjectCollectedException	PSU
ZULU-32080	8	System getpid may cache the wrong pid	PSU
ZULU-31027	8	Signal handlers from training runs are not cleaned	PSU
ZULU-30650	8	Unload JVM_PRELOADED libraries along all other libs	PSU
ZULU-30649	8	libjsig may remember handlers from unloaded libraries	PSU
ZULU-44216	8	Update JFX to zulu8u362-b02	PSU
ZULU-30242	8	Do not run atfork hooks for CRIU	PSU
ZULU-44097	8	Add option to build jfx8 linux binaries in aws	PSU
ZULU-43987	19, 17, 15, 13, 11	Update JFX to zulu19.0.2+102	PSU
ZULU-43971	17, 11, 8	Update CRS client to version 1.0.11	PSU
ZULU-43962	19	Not all links to the Azul website in welcome.html contains ?r=zulu for zulu19.32	PSU
ZULU-43939	19	Update JFX to zulu19.0.2+101	PSU
ZULU-43938	19, 17, 15, 13, 11, 8	Add "?r=zulu" to the URLs in the readme.txt and Welcome.html files	PSU

Azul Zulu Builds of OpenJDK with JavaFX Bug Fixes

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

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-43905	19, 17, 15, 13, 11, 8	Get libav sources from gitlab instead of libav.org	CPU,PSU
ZULU-44265	8	Opacity in WebView not working in Zulu8-JFX	PSU

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