



Azul Zulu builds of OpenJDK

April 2025 Quarterly Update

Release Notes

Revision 0.1

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Revision History

Revision	Date	Description
0.1	April 15, 2025	Initial version of the document.

Release Details

This release is the April 2025 quarterly update release for Azul Zulu Builds of OpenJDK version 24, 21, 17, 11, 8, 7, and 6.

The following table describes which Azul Zulu versions are published with this release.

Azul Zulu Version (*)	Update Type (**)	JDK Version	Based on		JavaFX Version
			Azul Zulu Version	JDK Version	
24.30.11 (CA) 24.30.13 (CA with JavaFX) 24.30.12 (SA) 24.30.14 (SA with JavaFX)	PSU	24.0.1+9	24.28	24.0.0+36	24.0.1+100
21.41.18 (SA)	CPU	21.0.6.0.101+2	21.40	21.0.6+7	23.0.2.0.101+102
21.42.19 (CA) 21.42.20 (SA)	PSU	21.0.7+6	21.41	21.0.6.0.101+2	23.0.3+100
17.57.18 (SA) 17.57.20 (SA JavaFX Win32)	CPU	17.0.14.0.101+2	17.56	17.0.14+7	22.0.4.0.101+101 22.0.4.0.101+102 (SA JavaFX Win32)
17.58.21 (CA) 17.58.22 (SA)	PSU	17.0.15+6	17.57	17.0.14.0.101+2	22.0.5+100

11.79.18 (SA) 11.79.20 (SA JavaFX Win32)	CPU	11.0.26.0.101+2	11.78	11.0.26+4	19.0.10.0.101+10 1 19.0.10.0.101+10 2 (SA JavaFX Win32)
11.80.21 (CA) 11.80.22 (SA)	PSU	11.0.27+6	11.79	11.0.26.0.101+2	19.0.11+100
8.85.0.22 (SA)	CPU	8u451-b02	8.84	8u442-b06	8u451-b04
8.86.0.25 (CA) 8.86.0.26 (SA)	PSU	8u452-b09	8.85	8u451-b02	8u452-b02
7.77 (SA)	CPU	7u461-b01	7.75	7u451-b02	N/A
6.71 (SA)	CPU	6b171	6.69	6b169	N/A

(*) Azul provides two types of distribution packages for each Java version:

- **Subscriber Availability (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 doesn't have to include specific licenses and that such a use doesn't contaminate the code or intellectual property of such software with any license requirements. SA builds may support configurations and features that are unavailable to free users.
- **Community Availability (CA)** distributions 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.

What's New

Coordinated Restore at Checkpoint (CRaC)

Warp CRaC Engine on ARM 64-bit

The [CRaC engine](#) is part of the CRaC implementation, which interoperates with the OS and encapsulates all the heavy lifting of checkpoint and restore operations. In earlier versions of Zulu, CRaC's default engine was based on a modified version of CRIU, which is available as open-source. This engine has some limitations, the most important being the requirement for root privileges to create and restore the checkpoint. This restriction prevents some production deployments in the field.

Azul implemented Warp as an extra CRaC engine to address these limitations. With this release, the Warp engine is now also available on Linux ARM 64-bit systems.

Closing of JARs Added to the Classpath

CRaC has been improved to correctly close JARs which were added to the boot classpath through

```
java.lang.instrument.Instrumentation.appendToBootstrapClassLoaderSearch
```

, so a checkpoint can be created.

Changed Checks Related to Checkpoint Location

Changes are applied to remove the requirement that the values provided by `CRaCCheckpointTo` and `CRaCRestoreFrom` are directories. This will enable the use of, for instance, cloud storage in the July 2025 release.

Automatically Closing and Opening of Listening Sockets

File Descriptor Policies for `type: SOCKET` has been expanded:

- Use the new property `listening: true` to filter server sockets.
- `action: reopen` automatically closes listening sockets, and can now also reopen them on restore, using the same local address.

See [File Descriptor Policies > Sockets](#) for more info.

Storing Checkpoints on S3

CRaC can now be configured to store and read checkpoints on S3-compatible buckets when using the Warp CRaC Engine. See [s3-storage](#)

Extended SBOM Availability

More SBOM information and file formats are now available for Azul customers for both Azul Zulu Builds of OpenJDK with and without OpenJFX. We also plan minor changes in the representation of the licensing information in the SBOM files for the next releases.

Please contact Azul Support (support@azul.com) if you need SBOM files and for details and assistance in preparation for the upcoming changes.

Jarsigner Prints a Warning for Removed Entry

Related to [JDK-8334260](#), a system has been added to detect if an entry is removed from a signed JAR. The `jarsigner -verify` command analyzes the signature files and if some sections do not have matching file entries, it prints out the following warning:

```
This JAR contains signed entries for files that do not exist
```

You can further find out the names of these entries by adding the `-verbose` option to the command.

Federal Information Processing Standards

To make Azul Zulu Builds of OpenJDK compliant with the Federal Information Processing Standards (FIPS), certain distributions for Java 8, 11, and 17 include a crypto algorithms implementation module (Bouncy Castle Crypto APIs).

NOTE

If you don't use the FIPS functionality, this change doesn't impact you. For more information about FIPS, check [Federal Information Processing Standards in Zulu](#).

Bouncy Castle Updated to v2.1

The FIPS implementation is based on Bouncy Castle and is upgraded in this release to version 2.1, to fix an issue with Online Certificate Status Protocol (OCSP) caching.

FIPS Support for Java 11 and 17

With this release, FIPS-compliant Azul Zulu Builds of OpenJDK are available for Java 11 and 17 in addition to Java 8.

Indy String Concat Changes Order of Operations

String concatenation has been changed to evaluate each argument and eagerly convert it to a String, in left-to-right order. This fixes a bug in the invokedynamic-based string concatenation strategies introduced in [JEP 280](#).

For example, the following now prints `foofoobar` instead of `foobarfoobar`:

```
StringBuilder builder = new StringBuilder("foo");
System.err.println("" + builder + builder.append("bar"));
```

Certificate Changes

Distrusted Camerfirma TLS Server Certificates

With this release, TLS Server certificates issued by Camerfirma are no longer trusted, similar to actions by [Apple](#), [Google](#), [Microsoft](#), and [Mozilla](#).

TLS Server certificates issued on or before April 15, 2025 will continue to be trusted until they expire. Certificates issued after that date will be rejected, with a message indicating the trust anchor is not trusted, for example:

```
TLS Server certificate issued after 2025-04-15 and anchored by a
distrusted legacy Camerfirma root CA
```

You can configure the JDK to trust these certificates again by removing

`CAMERFIRMA_TLS` from the `jdk.security.caDistrustPolicies` security property in the `java.security` configuration file.

Distrust Policy Backported to Zulu 6

Multiple changes are backported to Zulu 6 to include the mechanism that allows to distrust certificate policies.

- [8076117](#): EndEntityChecker should not process custom extensions after PKIX validation
- [8207258](#): Distrust TLS server certificates anchored by Symantec Root CAs
- [8337664](#): Distrust TLS server certificates issued after Oct 2024 and anchored by Entrust Root CAs
- [8341059](#): Change Entrust TLS distrust date to November 12, 2024
- [8287109](#): Distrust.java failed with CertificateExpiredException
- [8339560](#): Unaddressed comments during code review of JDK-8337664
- [8346587](#): Distrust TLS server certificates anchored by Camerfirma Root CAs

Toolchain Changes

Windows Redistributable Runtime Upgrade

In this release, the Redistributable Runtime (in JDK's bin directory) has been upgraded to the newer version `14.40.33807.0` for Azul Zulu 8 and above. This upgrade improves compatibility and stability for applications requiring the upgraded redistributable runtime.

Changes in JVM Arguments

Improved Parsing of `custom-providers`

The parsing of the argument `--custom-providers=<value>` has been improved to correctly handle cases where this arguments is specified more than once.

IANA Time Zone Data Version

This release of Azul Zulu comes with IANA Time Zone Database version **2025a**.

Supported Platforms

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

Azul Zulu Builds of OpenJDK Without and With OpenJFX

Some versions of Azul Zulu are available in different packages for specific platforms, as indicated in this overview table with:

-  : Build of OpenJDK without OpenJFX.
-  : Build of OpenJDK without and with OpenJFX.

NOTE

The list of supported configurations and platform includes, but is not limited to, the table below. Don't hesitate to [contact Support](#) if you have issues with Azul Zulu Builds of OpenJDK on any other platform or configuration.

Operating System	Azul Zulu Version						
	6	7	8	11	17	21	24
Windows (x86 32/64-bit)							
Windows Server 2025						 [1]	 [1]
Windows Server 2022						 [1]	 [1]
Windows Server 2019						 [1]	 [1]
Windows Server 2016						 [1]	 [1]
Windows 11						 [1]	 [1]

Windows 10						 [1]	 [1]
Windows (ARM 64-bit)							
Windows 11	n/a	n/a	n/a	n/a			n/a
Linux (x86 32/64-bit)							
RHEL 9.x						 [1]	 [1]
RHEL 8.x						 [1]	 [1]
RHEL 6.x and 7.x	n/a	n/a				n/a	n/a
SLES 15						 [1]	 [1]
SLES 12						 [1]	 [1]
CentOS Stream						 [1]	 [1]
Ubuntu 24.04						 [1]	 [1]
Ubuntu 22.04						 [1]	 [1]
Ubuntu 20.04						 [1]	 [1]
Ubuntu 18.04						 [1]	 [1]
Debian 12						 [1]	 [1]
Debian 11						 [1]	 [1]
Wind River 8.x	n/a			n/a	n/a	n/a	n/a

CoreOS	n/a	✓	✓	✓	✓	n/a	n/a
Alpine Linux 3.11 or later [2]	n/a	n/a	✓	✓	✓	✓	✓ [1] [2]
Amazon Linux 2023	n/a	n/a	✓	✓	✓	✓	✓ [1]
Linux (ARM 64-bit)							
Ubuntu 24.04	n/a	n/a	✓✓	✓✓	✓✓	✓✓	✓✓
Ubuntu 22.04	n/a	n/a	✓✓	✓✓	✓✓	✓✓	✓✓
Ubuntu 20.04	n/a	n/a	✓✓	✓✓	✓✓	✓✓	✓✓
Ubuntu 18.04	n/a	n/a	✓✓	✓✓	✓✓	✓✓	✓
Debian 12	n/a	n/a	✓✓	✓✓	✓✓	✓✓	✓✓
Debian 11	n/a	n/a	✓✓	✓✓	✓✓	✓✓	✓✓
Alpine Linux 3.11 or later [2]	n/a	n/a	✓	✓	✓	✓	✓ [2]
Amazon Linux 2023	n/a	n/a	✓	✓	✓	✓	✓
Linux with kernel 3.10.x and glibc 2.23 [3] [4]	n/a	n/a	✓	✓	n/a	n/a	n/a
Linux (ARM 32-bit Hard-Float)							
Ubuntu 18.04 [5]	n/a	n/a	✓	✓	✓	n/a	n/a
Raspbian 10 Buster [5]	n/a	n/a	✓	✓	✓	n/a	n/a
Raspbian 9 Stretch [5]	n/a	n/a	✓	✓	n/a	n/a	n/a
Linux with kernel 3.10.x and glibc 2.9 [5] [6]	n/a	n/a	✓	✓	n/a	n/a	n/a
Linux (ARM 32-bit Soft-Float) [7]							
Linux with kernel 2.6.34 and glibc 2.5 [8]	n/a	n/a	✓	✓	n/a	n/a	n/a
Debian 7 Wheezy [9]	n/a	n/a	✓	✓	n/a	n/a	n/a

Linux with kernel 3.10.x and glibc 2.9 [9]	n/a	n/a	✓	✓	n/a	n/a	n/a
Linux (MIPS 32-bit) [10]							
Linux with kernel 4.9.59 and glibc 2.9 [11]	n/a	n/a	✓	n/a	n/a	n/a	n/a
Linux (ppc64 Big Endian)							
Linux with kernel 3.8.13 and glibc 2.22 [12]	n/a	n/a	✓	n/a	n/a	n/a	n/a
Linux (ppc32 Hard-float and SPE)							
Linux with kernel 3.12.37 and glibc 2.20 [13]	n/a	n/a	✓	n/a	n/a	n/a	n/a
QNX							
QNX 7.0 ARMv7 32-bit Hard-Float ABI	n/a	n/a	✓	n/a	n/a	n/a	n/a
QNX 7.1 ARMv8 32-bit Hard-Float ABI	n/a	n/a	✓	n/a	n/a	n/a	n/a
MacOS (x86 64-bit)							
macOS 13+	n/a	✓	✓✓	✓✓	✓✓	✓✓	✓✓
MacOS (Apple Silicon)							
macOS 13+	n/a	n/a	✓✓	✓✓	✓✓	✓✓	✓✓
Solaris (x86 and Sparc)							
Solaris 11	n/a	✓	✓	✓	n/a	n/a	n/a
Solaris 10	n/a	✓	✓	n/a	n/a	n/a	n/a

1. Build of OpenJDK (with and without OpenJFX) only for 64-bit.
2. Alpine Linux 3.17 or later for Java 24
3. Bundles with the Checkpoint/Restore (with the `criu` suffix) functionality require kernel 4.4.0+.
4. Bundles compiled with GCC 9 (with the `gcc9` suffix) require glibc 2.29.

5. 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.
6. Bundles with the CRaM (with the `cr` suffix) functionality require glibc 2.13.
7. 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.
8. Bundles with the C1 compiler. Tested on ARMv5 hardware.
9. Bundles with the C1 compiler were tested on ARMv6 and ARMv7 hardware. Bundles with both C1 and C2 compilers were tested on ARMv7 hardware.
10. MIPS32r2 ISA, Big Endian, FPU in 32-bit mode or equivalent emulation.
11. Linux soft-float O32 MIPS ABI
12. Bundles for this platform were tested on QorIQ® T4240-RDB.
13. Hard-Float EABI bundles were tested on QorIQ® T1024RDB. SPE ABI bundles were tested on NXP® P2020RDB.

Azul Zulu Builds of OpenJDK With CRaC

NOTE

Currently, CRaC is only available for the specified Linux systems, in the versions listed below of Azul Zulu Builds of OpenJDK. For development, you can use the CRaC Java library on any platform and simulate the CRaC functionality.

-  : Build of OpenJDK with full CRaC support and the Warp engine. Currently available on Linux on `x86_64` and `ARM 64-bit` (using `GLIBC`), and as preview (EA) for Alpine Linux.
-  : Build of OpenJDK with CRaC support for development purposes. These provide a simulated checkpoint/restore mechanism to be used for development and testing.

Operating System	Azul Zulu Version					
	17		21		24	
	x86 64-bit	ARM 64-bit	x86 64-bit	ARM 64-bit	x86 64-bit	ARM 64-bit
Linux						

Alpine Linux 3.16	✓	✓	✓	✓	✓	✓
Windows	✓	n/a	✓	n/a	✓	n/a
macOS	✓	✓	✓	✓	✓	✓

Fixed Issues

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

Fixed Common Vulnerabilities and Exposures

NOTE | The full CVE list will be available in V1.0 of this release notes document.

Non-CVE Security Fixes

NOTE

The full Non-CVE Security Fixes list will be available in V1.0 of this release notes document.

OpenJDK Fixes and Enhancements

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

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8076117	6	EndEntityChecker should not process custom extensions after PKIX validation	CPU,PSU
JDK-8207258	6	Distrust TLS server certificates anchored by Symantec Root CAs	CPU,PSU
JDK-8216280	6	Allow later Symantec Policy distrust date for two Apple SubCAs	CPU,PSU
JDK-8286875	17, 21	ProgrammableUpcallHandler::on_entry/on_exit access thread fields from native	CPU,PSU
JDK-8287109	6, 7	Distrust.java failed with CertificateExpiredException	CPU,PSU
JDK-8308341	17	JNI_GetCreatedJavaVMs returns a partially initialized JVM	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8309171	17	Test vmTestbase/nsk/jvmti/scenarios/jni_interception/JI05/ji05t001/TestDescription.java fails after JDK-8308341	CPU,PSU
JDK-8309231	17	ProblemList vmTestbase/nsk/jvmti/scenarios/jni_interception/JI05/ji05t001/TestDescription.java	CPU,PSU
JDK-8309841	6, 7, 8, 11, 17, 21	Jarsigner should print a warning if an entry is removed	CPU,PSU
JDK-8317808	21	HTTP/2 stream cancellImpl may leave subscriber registered	CPU,PSU
JDK-8331735	17, 21	UpcallLinker::on_exit races with GC when copying frame anchor	CPU,PSU
JDK-8337664	6, 7	Distrust TLS server certificates issued after Oct 2024 and anchored by Entrust Root CAs	CPU,PSU
JDK-8339560	6, 7, 8, 11	Unaddressed comments during code review of JDK-8337664	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8339810	6, 7, 8, 11, 17, 21	Clean up the code in sun.tools.jar.Main to properly close resources and use ZipFile during extract	CPU,PSU
JDK-8343144	17, 21	UpcallLinker::on_entry racingly clears pending exception with GC safepoints	CPU,PSU
JDK-8346587	6, 7, 8, 11, 17, 21, 24	Distrust TLS server certificates anchored by Camerfirma Root CAs	CPU,PSU
JDK-8347965	6, 7, 8, 11, 17, 21, 24	(tz) Update Timezone Data to 2025a	CPU,PSU
JDK-8352097	8, 11, 17, 21	(tz) zone.tab update missed in 2025a backport	CPU,PSU
JDK-8353433	8	XCG currency code not recognized in JDK 8u	CPU,PSU
JDK-5064980	21	URI compareTo inconsistent with equals for mixed-case escape sequences	PSU
JDK-6355567	17	AdobeMarkerSegment causes failure to read valid JPEG	PSU
JDK-8005819	21	Support cross-realm MSSFU	PSU
JDK-8037013	8	[TESTBUG] Fix test/java/lang/ClassLoader/Assert.sh on AIX	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8048215	8	[TESTBUG] java/lang/management/ManagementFactory/ThreadMXBeanProxy.java Expected non-null LockInfo	PSU
JDK-8065099	17	[macos] javax/swing/PopupFactory/6276087/NonOpaquePopupMenuTest.java fails: no background shine through	PSU
JDK-8068305	8	[TEST_BUG] Test java/awt/Mixing/HWDisappear.java fails with GTKL&F	PSU
JDK-8195675	11	Call to insertText with single character from custom Input Method ignored	PSU
JDK-8198237	17, 21	[macos] Test java/awt/Frame/ExceptionOnSetExtendedStateTest/ExceptionOnSetExtendedStateTest.java fails	PSU
JDK-8198666	17	Many java/awt/Modal/OnTop/ test fails on mac	PSU
JDK-8199290	21	[TESTBUG] sun.hotspot.WhiteBox\$WhiteBoxPermission is not copied	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8202926	11	Test java/awt/Focus/WindowUpdateFocusabilityTest/WindowUpdateFocusabilityTest.html fails	PSU
JDK-8208565	17	[TEST_BUG] javax\swing\PopupFactory\6276087\NonOpaquePopupMenuTest.java throws NPE	PSU
JDK-8211851	21, 24	(ch) java/nio/channels/AsynchronousSocketChannel/StressLoopback.java times out (aix)	PSU
JDK-8212096	8	javax/net/ssl/ServerName/SSLEngineExplorerMatchedSNI.java failed intermittently due to SSLException: Tag mismatch	PSU
JDK-8216539	11	tools/jar/modularJar/Basic.java timed out	PSU
JDK-8225361	21	Start of release updates for JDK 15	PSU
JDK-8226933	17, 21	[TEST_BUG]GTK L&F: There is no swatches or RGB tab in JColorChooser	PSU
JDK-8226938	17, 21	[TEST_BUG]GTK L&F: There is no Details button in FileChooser Dialog	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8227529	21	With malformed --app-image the error messages are awful	PSU
JDK-8227651	8	Tests fail with SSLProtocolException: Input record too big	PSU
JDK-8229888	21	(zipfs) Updating an existing zip file does not preserve original permissions	PSU
JDK-8230771	21	Remove terminally deprecated constructors in java.base	PSU
JDK-8230933	21	Default icon is not set for additional launchers	PSU
JDK-8231559	21	Remove expired flags in JDK 15	PSU
JDK-8231612	21	100% cpu on arm32 in Service Thread	PSU
JDK-8232209	21	Update double-conversion license file to version 3.1.5	PSU
JDK-8232733	21	Remove need to grab Threads_lock while processing handshakes	PSU
JDK-8232896	21	ZGC: Enable C2 clone intrinsic	PSU
JDK-8233019	21	java.lang.Class.isPrimitive() (C1) returns wrong result if Klass* is aligned to 32bit	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8233081	21	C1: PatchingStub for field access copies too much	PSU
JDK-8233270	21	Add support to jtreg helpers to unpack packages	PSU
JDK-8233375	21	JFR emergency dump does not recover thread state	PSU
JDK-8233401	21	Shenandoah: Refactor/cleanup Shenandoah load barrier code	PSU
JDK-8233429	21	Minimal and zero VM build broken after JDK-8227003	PSU
JDK-8233494	21	Avoid calling MallocTracker::record_malloc and record_free when NMT is off	PSU
JDK-8233495	21	Some fieldDescriptor methods can pass existing constantPoolHandle	PSU
JDK-8233496	21	AOT tests failures with 'java.lang.RuntimeException: Failed to find sun/hotspot/WhiteBox.class'	PSU
JDK-8233530	21	gcc 5.4 build warning -Wc++14-compat after JDK-8233359	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8233574	21	Shenandoah: build is broken without jfr	PSU
JDK-8233590	21	Compiler thread creation fails with assert(!_c2_count > 0 !_c1_count > 0) failed: No compilers?	PSU
JDK-8233599	21	ARM32 Build failed due to 8232050 missing an include	PSU
JDK-8233608	21	Minimal build broken after JDK-8233494	PSU
JDK-8233622	21	(zipfs) open/test/jdk/jdk/nio/zipfs/CopyMoveTests.java has incorrect bug label	PSU
JDK-8233650	21	Javadoc for Math.floorMod(int, int) gives wrong example	PSU
JDK-8233659	21	[TESTBUG] runtime/cds/appcds/CommandLineFlagCombo.java fails when jfr is disabled	PSU
JDK-8234465	21	Encoded elliptic curve private keys should include the public point	PSU
JDK-8234697	21	Generate sun.security.util.math.intpoly classes during build	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8234728	21	Some security tests should support TLSv1.3	PSU
JDK-8234968	21	check calloc rv in libinstrument InvocationAdapter	PSU
JDK-8234971	21	Incorrect example in j.l.reflect.RecordComponent::toString	PSU
JDK-8234974	21	Shenandoah: Do concurrent roots even when no evacuation is necessary	PSU
JDK-8235238	21	Parsing a time string ignores any custom TimeZoneNameProvider	PSU
JDK-8235306	21	Support doc-comment tags that can be inline or block tags	PSU
JDK-8235447	21	Remove (obsolete) @author info from javadoc tests	PSU
JDK-8235454	21	[TESTBUG] Basic test for JFR event streaming for jdk_jfr_sanity	PSU
JDK-8235497	21	Add SourceVersion.RELEASE_15	PSU
JDK-8235514	21	Update record serialization tests to not use hard coded source versions	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8235528	21	Add source 15 and target 15 to javac	PSU
JDK-8235563	21	[TESTBUG] appcds/CommandLineFlagComboNegative.java does not handle archive mapping failure	PSU
JDK-8235667	21	IOUtils.copyFile() problems.	PSU
JDK-8235671	21	enhance print_rlimit_info in os_posix	PSU
JDK-8235778	21	No compilation error reported when a record is declared in a local class	PSU
JDK-8235824	21	C2: Merge AD instructions for AddReductionV and MulReductionV nodes	PSU
JDK-8235825	21	C2: Merge AD instructions for Replicate nodes	PSU
JDK-8235842	21	Shenandoah: Implement native LRB for narrow oop	PSU
JDK-8235905	21	ZGC: Rework how ZRootsIterator visits threads	PSU
JDK-8235907	21	Fix tests referencing UseParallelOldGC	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8235915	21	jpackage associations fail when there are spaces in file name or path	PSU
JDK-8235922	21	[TESTBUG]TestRecordAttrGenericSig.java and TestRecordAttr.java are failing	PSU
JDK-8235925	21	java/net/Socket/HttpProxy.java fails on IPv4 only hosts and other small cleanups	PSU
JDK-8235930	21	java.util.regex.PrintPattern does not print a link to the next node	PSU
JDK-8235947	21	Cleanup/simplify Utils.getBlockTags	PSU
JDK-8235956	21	Remove javaClasses offset tests	PSU
JDK-8235965	21	Tests using ThreadLocalHandshakes need to stop using it as it no longer exists	PSU
JDK-8235970	21	[TESTBUG] Remove dependency of sun.tools.jar from RedefineClassHelper	PSU
JDK-8235996	21	Move obsolete flag G1RSetScanBlockSize in flags list	PSU
JDK-8236028	21	[TESTBUG] Remove dependency of sun.tools.jar from appcds/JarBuilder	PSU
JDK-8236030	21	Cleanup use of String.toCharArray	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8236045	21	[TESTBUG] MismatchedWhiteBox test fails with missing WhiteBox\$WhiteBoxPermission.class	PSU
JDK-8236070	21	Backout fix for JDK-8234465	PSU
JDK-8236077	21	Clean up the use of modifiers and semicolons	PSU
JDK-8236106	21	[TESTBUG] Shenandoah: Make TestThreadFailure more resilient	PSU
JDK-8236130	21	ProblemList jdk/jfr/jmx/security/TestEnoughPermission.java	PSU
JDK-8236134	21	files missing in putback to JDK-8233270	PSU
JDK-8236226	21	fix merge error in src/hotspot/share/gc/z/zRootsIterator.cpp	PSU
JDK-8240235	8	jdk.test.lib.util.JarUtils updates jar files incorrectly	PSU
JDK-8250825	8	C2 crashes with assert(field != __null) failed: missing field	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8255466	8	C2 crashes at ciObject::get_oop() const+0x0	PSU
JDK-8261020	8	Wrong format parameter in create_emergency_chunk_path	PSU
JDK-8265019	8	Update tests for additional TestNG test permissions	PSU
JDK-8266435	17	WBMPImageReader.read() should not truncate the input stream	PSU
JDK-8266881	8	Enable debug log for SSLEngineExplorerMatchedSNI.java	PSU
JDK-8267893	17	Improve jtreg test failure handler do get native/mixed stack traces for cores and live processes	PSU
JDK-8268364	11	jmethod clearing should be done during unloading	PSU
JDK-8268457	8	XML Transformer outputs Unicode supplementary character incorrectly to HTML	PSU
JDK-8270961	17	[TESTBUG] Move GotWrongOOMException into vm.share.gc package	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8273914	11	Indy string concat changes order of operations	PSU
JDK-8274893	17	Update java.desktop classes to use try-with-resources	PSU
JDK-8276202	17	LogFileOutput.invalid_file_vm asserts when being executed from a read only working directory	PSU
JDK-8277240	17, 21	java/awt/Graphics2D/ScaledTransform/ScaledTransform.java dialog does not get disposed	PSU
JDK-8281234	17	The -protected option is not always checked in keytool and jarsigner	PSU
JDK-8282314	17	nsk/jvmti/SuspendThread/suspendthrd003 may leak memory	PSU
JDK-8283387	17	[macos] a11y : Screen magnifier does not show selected Tab	PSU
JDK-8283404	17	[macos] a11y : Screen magnifier does not show JMenu name	PSU
JDK-8283664	17, 21	Remove jtre tag manual=yesno for java/awt/print/PrinterJob/PrintTextTest.java	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8285756	8	clean up use of bad arguments for <code>@clean</code> in langtools tests	PSU
JDK-8286779	17	<code>javax.crypto.CryptoPolicyParser#isConsistent</code> always returns 'true'	PSU
JDK-8290043	24	<code>serviceability/attach/ConcAttachTest.java</code> failed "guarantee(!CheckJNICalls) failed: Attached JNI thread exited without being detached"	PSU
JDK-8290400	17	Must run exe installers in <code>jpackage jtreg</code> tests without UI	PSU
JDK-8292588	17	[macos] <code>Multiscreen/MultiScreenLocationTest/MultiScreenLocationTest.java</code> : <code>Robot.mouseMove</code> test failed on Screen #0	PSU
JDK-8292704	17	<code>sun/security/tools/jarsigner/compatibility/Compatibility.java</code> use wrong key size for EC	PSU
JDK-8292848	17	AWT_Mixing and TrayIcon tests fail on el8 with hard-coded <code>isOel7</code>	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8293345	17, 21	SunPKCS11 provider checks on PKCS11 Mechanism are problematic	PSU
JDK-8293412	17	Remove unnecessary java.security.egd overrides	PSU
JDK-8294067	17	[macOS] javax/swing/JComboBox/6559152/bug6559152.java Cannot select an item from popup with the ENTER key.	PSU
JDK-8294316	11, 17, 21	SA core file support is broken on macosx-x64 starting with macOS 12.x	PSU
JDK-8295087	17	Manual Test to Automated Test Conversion	PSU
JDK-8295159	21	DSO created with -ffast-math breaks Java floating-point arithmetic	PSU
JDK-8295176	17	some langtools test pollutes source tree	PSU
JDK-8296591	17	Signature benchmark	PSU
JDK-8296818	17	Enhance JMH tests java/security/Signatures.java	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8299077	17	[REDO] JDK-4512626 Non-editable JTextArea provides no visual indication of keyboard focus	PSU
JDK-8299127	17	[REDO] JDK-8194048 Regression automated test '/open/test/jdk/javax/swing/text/DefaultCaret/HidingSelection/HidingSelectionTest.java' fails	PSU
JDK-8299128	17	[REDO] JDK-8213562 Test javax/swing/text/DefaultCaret/HidingSelection/MultiSelectionTest.java fails	PSU
JDK-8299739	17	HashedPasswordFileTest.java and ExceptionTest.java can fail with java.lang.NullPointerException	PSU
JDK-8299994	17	java/security/Policy/Root/Root.java fails when home directory is read-only	PSU
JDK-8301989	17	new javax.swing.text.DefaultCaret().setBlinkRate(N) results in NPE	PSU
JDK-8302111	17, 21	Serialization considerations	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8304701	21	Request with timeout aborts later in-flight request on HTTP/1.1 cxn	PSU
JDK-8305853	17	java/text/Format/DateFormat/DateFormatRegression.java fails with "Uncaught exception thrown in test method Test4089106"	PSU
JDK-8306711	17	Improve diagnosis of <code>IntlTest</code> framework	PSU
JDK-8309740	17	Expand timeout windows for tests in JDK-8179502	PSU
JDK-8310234	17	Refactor Locale tests to use JUnit	PSU
JDK-8310629	17	java/security/cert/CertPathValidator/OCS P/OCSPTIMEOUT.java fails with RuntimeException Server not ready	PSU
JDK-8311306	17	Test com/sun/management/ThreadMXBean/ThreadCpuTimeArray.java failed: out of expected range	PSU
JDK-8311546	17, 21	Certificate name constraints improperly validated with leading period	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8311663	17	Additional refactoring of Locale tests to JUnit	PSU
JDK-8312049	11	runtime/logging/ClassLoadUnloadTest can be improved	PSU
JDK-8312416	17	Tests in Locale should have more descriptive names	PSU
JDK-8312518	17	[macos13] setFullScreenWindow() shows black screen on macOS 13 & above	PSU
JDK-8312570	21	[TESTBUG] Jtreg compiler/loopopts/superword/TestDependencyOffsets.java fails on 512-bit SVE	PSU
JDK-8313633	17, 21	[macOS] java/awt/dnd/NextDropActionTest/NextDropActionTest.java fails with java.lang.RuntimeException: wrong next drop action!	PSU
JDK-8313710	17	jcmm: typo in the documentation of JFR.start and JFR.dump	PSU
JDK-8313905	21	Checked_cast assert in CDS compare_by_loader	PSU
JDK-8314225	17	SIGSEGV in JavaThread::is_lock_owned	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8314610	17	hotspot can't compile with the latest of gtest because of <iomanip>	PSU
JDK-8314752	17, 21	Use google test string comparison macros	PSU
JDK-8314909	17, 21	tools/jpackage/windows/Win8282351Test.java fails with java.lang.AssertionError: Expected [0]. Actual [1618]:	PSU
JDK-8314975	17	JavadocTester should set source path if not specified	PSU
JDK-8315486	17, 21	vmTestbase/nsk/jdwp/ThreadReference/ForceEarlyReturn/forceEarlyReturn002/forceEarlyReturn002.java timed out	PSU
JDK-8315825	17, 21	Open some swing tests	PSU
JDK-8315882	17, 21	Open some swing tests 2	PSU
JDK-8315883	17, 21	Open source several Swing JToolBar tests	PSU
JDK-8315952	17, 21	Open source several Swing JToolBar JTooltip JTree tests	PSU
JDK-8316056	17, 21	Open source several Swing JTree tests	PSU
JDK-8316146	17, 21	Open some swing tests 4	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8316149	17, 21	Open source several Swing JTree JViewport KeyboardManager tests	PSU
JDK-8316193	8	jdk/jfr/event/oldobject/TestListenerLeak.java java.lang.Exception: Could not find leak	PSU
JDK-8316218	17, 21	Open some swing tests 5	PSU
JDK-8316371	17, 21	Open some swing tests 6	PSU
JDK-8316559	17	Refactor some util/Calendar tests to JUnit	PSU
JDK-8316627	17, 21	JViewport Test headless failure	PSU
JDK-8316696	17	Remove the testing base classes: IntlTest and CollatorTest	PSU
JDK-8316885	21	jcmd: Compiler.CodeHeap_Analytics cmd does not inform about missing aggregate	PSU
JDK-8317283	21	jpackage tests run osx-specific checks on windows and linux	PSU
JDK-8317631	17	Refactor ChoiceFormat tests to use JUnit	PSU
JDK-8317636	17, 21	Improve heap walking API tests to verify correctness of field indexes	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8317919	21	pthread_attr_init handle return value and destroy pthread_attr_t object	PSU
JDK-8318442	17	java/net/httpclient/ManyRequests2.java fails intermittently on Linux	PSU
JDK-8319233	21	AArch64: Build failure with clang due to -Wformat-nonliteral warning	PSU
JDK-8319567	17	Update java/lang/invoke tests to support vm flags	PSU
JDK-8319568	17	Update java/lang/reflect/exeCallerAccessTest/CallerAccessTest.java to accept vm flags	PSU
JDK-8319569	17	Several java/util tests should be updated to accept VM flags	PSU
JDK-8319647	17	Few java/lang/System/LoggerFinder/modules tests ignore vm flags	PSU
JDK-8319648	17	java/lang/SecurityManager tests ignore vm flags	PSU
JDK-8319672	17	Several classloader tests ignore VM flags	PSU
JDK-8319673	17	Few security tests ignore VM flags	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8319676	17	A couple of jdk/modules/incubator/ tests ignore VM flags	PSU
JDK-8319677	17	Test jdk/internal/misc/VM/RuntimeArguments. java should be marked as flagless	PSU
JDK-8319818	17	Address GCC 13.2.0 warnings (stringop-overflow and dangling-pointer)	PSU
JDK-8320372	17, 21	test/jdk/sun/security/x509/DNSName/LeadingPeriod.java validity check failed	PSU
JDK-8320676	17, 21	Manual printer tests have no Pass/Fail buttons, instructions close set 1	PSU
JDK-8320706	21	RuntimePackageTest.testUsrInstallDir test fails on Linux	PSU
JDK-8320714	17	java/util/Locale/LocaleProvidersRun.java and java/util/ResourceBundle/modules/visibility/VisibilityTest.java timeout after passing	PSU
JDK-8320916	11, 17, 21	jdk/jfr/event/gc/stacktrace/TestParallelMarkSweepAllocationPendingStackTrace.java failed with "OutOfMemoryError: GC overhead limit exceeded"	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8321512	21	runtime/CommandLine/OptionsValidation/TestOptionsWithRanges.java fails on 32-bit platforms	PSU
JDK-8321818	17, 21	vmTestbase/nsk/stress/strace/strace015.java failed with 'Cannot read the array length because "<local4>" is null'	PSU
JDK-8322983	21	Virtual Threads: exclude 2 tests	PSU
JDK-8323196	17	jdk/jfr/api/consumer/filestream/TestOrdered.java failed with "Events are not ordered! Reuse = false"	PSU
JDK-8324672	17, 21	Update jdk/java/time/tck/java/time/TCKInstant.java now() to be more robust	PSU
JDK-8324807	17, 21	Manual printer tests have no Pass/Fail buttons, instructions close set 2	PSU
JDK-8324838	21	test_nmt_locationprinting.cpp broken in the gcc windows build	PSU
JDK-8325024	17	java/security/cert/CertPathValidator/OCS P/OCSPTIMEOUT.java incorrect comment information	PSU
JDK-8325042	17, 21	Remove unused JVMDITools test files	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8325529	17, 21	Remove unused imports from <code>ModuleGenerator</code> test file	PSU
JDK-8325659	17, 21	Normalize Random usage by incubator vector tests	PSU
JDK-8325906	17	Problemlist vmTestbase/vm/mlvm/meth/stress/compiler/deoptimize/Test.java#id1 until JDK-8320865 is fixed	PSU
JDK-8325908	17	Finish removal of IntlTest and CollatorTest	PSU
JDK-8325937	17, 21	runtime/handshake/HandshakeDirectTest.java causes "monitor end should be strictly below the frame pointer" assertion failure on AArch64	PSU
JDK-8326110	8	[8u] The Marlin tests should be updated after JDK-8241307	PSU
JDK-8326421	17, 21	Add jtreg test for large arrayCopy disjoint case.	PSU
JDK-8326525	17, 21	com/sun/tools/attach/BasicTests.java does not verify AgentLoadException case	PSU
JDK-8327098	17, 21	GTest needs larger combination limit	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8327390	21	JitTester: Implement temporary folder functionality	PSU
JDK-8327476	17, 21	Upgrade JLine to 3.26.1	PSU
JDK-8327505	17, 21	Test com/sun/jmx/remote/NotificationMarshal Versions/TestSerializationMismatch.java fails	PSU
JDK-8327650	11	Test java/nio/channels/DatagramChannel/StressNativeSignal.java timed out	PSU
JDK-8327857	17, 21	Remove applet usage from JColorChooser tests Test4222508	PSU
JDK-8327859	17, 21	Remove applet usage from JColorChooser tests Test4319113	PSU
JDK-8327986	17, 21	ASAN reports use-after-free in DirectivesParserTest.empty_object_vm	PSU
JDK-8327994	21	Update code gen in CallGeneratorHelper	PSU
JDK-8328005	17, 21	Convert java/awt/im/JTextFieldTest.java applet test to main	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8328085	17, 21	C2: Use after free in PhaseChaitin::Register_Allocate()	PSU
JDK-8328121	17, 21	Remove applet usage from JColorChooser tests Test4759306	PSU
JDK-8328130	17, 21	Remove applet usage from JColorChooser tests Test4759934	PSU
JDK-8328185	17, 21	Convert java/awt/image/MemoryLeakTest/MemoryLeakTest.java applet test to main	PSU
JDK-8328227	17, 21	Remove applet usage from JColorChooser tests Test4887836	PSU
JDK-8328242	11	Add a log area to the PassFailJFrame	PSU
JDK-8328344	17, 21	[CRaC] Avoid error when running with -XX:+PerfDisableSharedMem	PSU
JDK-8328368	17, 21	Convert java/awt/image/multiresolution/MultiDisplayTest/MultiDisplayTest.java applet test to main	PSU
JDK-8328370	17, 21	Convert java/awt/print/Dialog/PrintApplet.java applet test to main	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8328380	17, 21	Remove applet usage from JColorChooser tests Test6348456	PSU
JDK-8328387	17, 21	Convert java/awt/Frame/FrameStateTest/FrameStateTest.html applet test to main	PSU
JDK-8328403	17, 21	Remove applet usage from JColorChooser tests Test6977726	PSU
JDK-8328553	17, 21	Get rid of JApplet in test/jdk/sanity/client/lib/SwingSet2/src/DemoModule.java	PSU
JDK-8328558	17, 21	Convert javax/swing/JCheckBox/8032667/bug8032667.java applet test to main	PSU
JDK-8328717	17, 21	Convert javax/swing/JColorChooser/8065098/bug8065098.java applet test to main	PSU
JDK-8328719	17, 21	Convert java/awt/print/PageFormat/SetOrient.html applet test to main	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8328730	17, 21	Convert java/awt/print/bug8023392/bug8023392. html applet test to main	PSU
JDK-8328753	17, 21	Open source few Undecorated Frame tests	PSU
JDK-8328819	17, 21	Remove applet usage from JFileChooser tests bug6698013	PSU
JDK-8328827	17, 21	Convert java/awt/print/PrinterJob/PrinterDialogs ModalityTest/PrinterDialogsModalityTest. html applet test to main	PSU
JDK-8329210	17, 21	Delete Redundant Printer Dialog Modality Test	PSU
JDK-8329320	17, 21	Simplify awt/print/PageFormat/NullPaper.java test	PSU
JDK-8329322	17, 21	Convert PageFormat/Orient.java to use PassFailJFrame	PSU
JDK-8329692	17, 21	Add more details to FrameStateTest.java test instructions	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8330647	21	Two CDS tests fail with -UseCompressedOops and UseSerialGC/UseParallelGC	PSU
JDK-8330702	17, 21	Update failure handler to don't generate Error message if cores actions are empty	PSU
JDK-8331153	17	JFR: Improve logging of jdk/jfr/api/consumer/filestream/TestOrdered.java	PSU
JDK-8331863	11	DUIterator_Fast used before it is constructed	PSU
JDK-8331959	17, 21	Update PKCS#11 Cryptographic Token Interface to v3.1	PSU
JDK-8331977	21	Crash: SIGSEGV in dlerror()	PSU
JDK-8331993	21	Add counting leading/trailing zero tests for Integer	PSU
JDK-8332158	17, 21	[XWayland] test/jdk/java/awt/Mouse/EnterExitEvents/ResizingFrameTest.java	PSU
JDK-8332494	21	java/util/zip/EntryCount64k.java failing with java.lang.RuntimeException: '\\A\\Z' missing from stderr	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8332917	17, 21	failure_handler should execute gdb "info threads" command on linux	PSU
JDK-8333116	21	test/jdk/tools/jpackage/share/ServiceTest.java test fails	PSU
JDK-8333360	17, 21	PrintNullString.java doesn't use float arguments	PSU
JDK-8333391	17, 21	Test com/sun/jdi/InterruptHangTest.java failed: Thread was never interrupted during sleep	PSU
JDK-8333403	17, 21	Write a test to check various components events are triggered properly	PSU
JDK-8333427	17	langtools/tools/javac/newlines/NewLineTest.java is failing on Japanese Windows	PSU
JDK-8333647	21	C2 SuperWord: some additional PopulateIndex tests	PSU
JDK-8334305	17, 21	Remove all code for nsk.share.Log verbose mode	PSU
JDK-8334371	21	[AIX] Beginning with AIX 7.3 TL1 mmap() supports 64K memory pages	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8334490	17, 21	Normalize string with locale invariant <code>toLowerCase()</code>	PSU
JDK-8334777	17, 21	Test <code>javax/management/remote/mandatory/notif/NotifReconnectDeadlockTest.java</code> failed with <code>NullPointerException</code>	PSU
JDK-8335150	17	Test <code>LogGeneratedClassesTest.java</code> fails on rpmbuild mock environment	PSU
JDK-8335172	17	Add manual steps to run <code>security/auth/callback/TextCallbackHandler/Password.java</code> test	PSU
JDK-8335288	21	SunPKCS11 initialization will call <code>C_GetMechanismInfo</code> on unsupported mechanisms	PSU
JDK-8335468	21	[XWayland] JavaFX hangs when calling <code>java.awt.Robot.getPixelColor</code>	PSU
JDK-8335789	17, 21	[TESTBUG] <code>XparColor.java</code> test fails with <code>Error. Parse Exception: Invalid or unrecognized bugid: @</code>	PSU
JDK-8335912	8, 11, 17, 21	Add an operation mode to the <code>jar</code> command when extracting to not overwriting existing files	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8336012	11, 17, 21	Fix usages of jtreg-reserved properties	PSU
JDK-8336692	17, 21	Redo fix for JDK-8284620	PSU
JDK-8336942	17, 21	Improve test coverage for class loading elements with annotations of different retentions	PSU
JDK-8337124	21	(fs) sun.nio.fs.WindowsSecurity.enablePrivilege should pin when continuations supported	PSU
JDK-8337222	17, 21	gc/TestDisableExplicitGC.java fails due to unexpected CodeCache GC	PSU
JDK-8337660	21	C2: basic blocks with only BoxLock nodes are wrongly treated as empty	PSU
JDK-8337826	17	Improve logging in OCSPTimeout and SimpleOCSPResponder to help diagnose JDK-8309754	PSU
JDK-8337886	17, 21	java/awt/Frame/MaximizeUndecoratedTest.java fails in OEL due to a slight color difference	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8337951	17, 21	Test sun/security/validator/samedn.sh CertificateNotYetValidException: NotBefore validation	PSU
JDK-8337994	21	[REDO] Native memory leak when not recording any events	PSU
JDK-8338100	17, 21	C2: assert(!in_loop is_member(get_loop(lca))) failed: control must not be back in the loop	PSU
JDK-8338303	21	Linux ppc64le with toolchain clang - detection failure in early JVM startup	PSU
JDK-8338426	17, 21	Test java/nio/channels/Selector/WakeupNow.j ava failed	PSU
JDK-8338571	17, 21	[TestBug] DefaultCloseOperation.java test not working as expected wrt instruction after JDK-8325851 fix	PSU
JDK-8338595	17, 21	Add more linesize for MIME decoder in macro bench test Base64Decode	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8338668	17, 21	Test javax/swing/JFileChooser/8080628/bug8080628.java doesn't test for GTK L&F	PSU
JDK-8339154	17, 21	Cleanups and JUnit conversion of test/jdk/java/util/zip/Available.java	PSU
JDK-8339261	17, 21	Logs truncated in test javax/net/ssl/DTLS/DTLSRehandshakeTest.java	PSU
JDK-8339356	17, 21, 24	Test javax/net/ssl/SSLSocket/Tls13PacketSize.java failed with java.net.SocketException: An established connection was aborted by the software in your host machine	PSU
JDK-8339475	21	Clean up return code handling for pthread calls in library coding	PSU
JDK-8339524	17, 21	Clean up a few ExtendedRobot tests	PSU
JDK-8339542	21	compiler/codecache/CheckSegmentedCodeCache.java fails	PSU
JDK-8339637	8, 11, 17, 21	(tz) Update Timezone Data to 2024b	PSU
JDK-8339644	8, 11, 17, 21	Improve parsing of Day/Month in tzdata rules	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8339687	17, 21	Rearrange reachabilityFence()s in jdk.test.lib.util.ForceGC	PSU
JDK-8339728	17, 21	[Accessibility,Windows,JAWS] Bug in the getKeyChar method of the AccessBridge class	PSU
JDK-8339803	8, 11, 17, 21	Acknowledge case insensitive unambiguous keywords in tzdata files	PSU
JDK-8339834	21	Replace usages of -mx and -ms in some tests	PSU
JDK-8339883	17, 21	Open source several AWT/2D related tests	PSU
JDK-8339902	17, 21	Open source couple TextField related tests	PSU
JDK-8339931	11	Update problem list for WindowUpdateFocusabilityTest.java	PSU
JDK-8339943	17, 21	Frame not disposed in java/awt/dnd/DropActionChangeTest.java	PSU
JDK-8340078	17, 21	Open source several 2D tests	PSU
JDK-8340116	17, 21	test/jdk/sun/security/tools/jarsigner/PreserveRawManifestEntryAndDigest.java can fail due to regex	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8340313	21	Crash due to invalid oop in nmethod after C1 patching	PSU
JDK-8340387	11	Update OS detection code to recognize Windows Server 2025	PSU
JDK-8340411	17, 21	open source several 2D imaging tests	PSU
JDK-8340480	17, 21	Bad copyright notices in changes from JDK-8339902	PSU
JDK-8340660	8	[8u] Test com/sun/jdi/PrivateTransportTest.sh fails on MacOS	PSU
JDK-8340687	17, 21	Open source closed frame tests #1	PSU
JDK-8340719	17, 21	Open source AWT List tests	PSU
JDK-8340824	21	C2: Memory for TypeInterfaces not reclaimed by hashcons()	PSU
JDK-8340969	17, 21	jdk/jfr/startupargs/TestStartDuration.java should be marked as flagless	PSU
JDK-8341037	17, 21	Use standard layouts in DefaultFramelconTest.java and MenuCrash.java	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8341111	17, 21	open source several AWT tests including menu shortcut tests	PSU
JDK-8341135	21	Incorrect format string after JDK-8339475	PSU
JDK-8341194	21	[REDO] Implement C2 VectorizedHashCode on AArch64	PSU
JDK-8341316	17, 21	[macos] javax/swing/ProgressMonitor/ProgressMonitorEscapeKeyPress.java fails sometimes in macos	PSU
JDK-8341412	17, 21	Various test failures after JDK-8334305	PSU
JDK-8341453	17, 21	java/awt/a11y/AccessibleJTableTest.java fails in some cases where the test tables are not visible	PSU
JDK-8341715	21	PPC64: ObjectMonitor::_owner should be reset unconditionally in nmethod unlocking	PSU
JDK-8341722	17	Fix some warnings as errors when building on Linux with toolchain clang	PSU
JDK-8341820	21	Check return value of hcreate_r	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8341862	21	PPC64: C1 unwind_handler fails to unlock synchronized methods with LM_MONITOR	PSU
JDK-8341881	17, 21	[REDO] java/nio/file/attribute/BasicFileAttributeView/CreationTime.java#tmp fails on alinux3	PSU
JDK-8341978	17, 21	Improve JButton/bug4490179.java	PSU
JDK-8341982	17, 21	Simplify JButton/bug4323121.java	PSU
JDK-8342098	17, 21	Write a test to compare the images	PSU
JDK-8342145	17, 21	File libCreationTimeHelper.c compile fails on Alpine	PSU
JDK-8342270	17, 21	Test sun/security/pkcs11/Provider/RequiredMechCheck.java needs write access to src tree	PSU
JDK-8342498	17, 21	Add test for Allocation elimination after use as alignment reference by SuperWord	PSU
JDK-8342508	17, 21	Use latch in BasicMenuUI/bug4983388.java instead of delay	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8342541	17, 21	Exclude List/KeyEventsTest/KeyEventsTest.java from running on macOS	PSU
JDK-8342602	17, 21	Remove JButton/PressedButtonRightClickTest test	PSU
JDK-8342607	17	Enhance register printing on x86_64 platforms	PSU
JDK-8342609	17, 21	jpackage test helper function incorrectly removes a directory instead of its contents only	PSU
JDK-8342634	17, 21	javax/imageio/plugins/wbmp/WBMPStreamTruncateTest.java creates temp file in src dir	PSU
JDK-8342635	17, 21	javax/swing/JFileChooser/FileSystemView/WindowsDefaultIconSizeTest.java creates tmp file in src dir	PSU
JDK-8342811	17, 21	java/net/httpclient/PlainProxyConnectionTest.java failed: Unexpected connection count: 5	PSU
JDK-8342822	8	jdk8u432-b06 does not compile on AIX	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8343100	17, 21	Consolidate EmptyFolderTest and EmptyFolderPackageTest jpackage tests into single java file	PSU
JDK-8343101	17, 21	Rework BasicTest.testTemp test cases	PSU
JDK-8343102	21	Remove <code>--compress</code> from jlink command lines from jpackage tests	PSU
JDK-8343118	17, 21	[TESTBUG] java/awt/PrintJob/PrintCheckboxTest/PrintCheckboxManualTest.java fails with error. Can't find HTML file PrintCheckboxManualTest.html	PSU
JDK-8343128	17, 21	PassFailJFrame.java test result: Error. Bad action for script: build}	PSU
JDK-8343129	17, 21	Disable unstable check of ThreadsListHandle.sanity_vm ThreadList values	PSU
JDK-8343149	21	Cleanup os::print_tos_pc on AIX	PSU
JDK-8343178	17, 21	Test BasicTest.java javac compile fails cannot find symbol	PSU
JDK-8343205	21	CompileBroker::possibly_add_compiler_th reads excessively polls available memory	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8343314	21	Move common properties from jpackage jtreg test declarations to TEST.properties file	PSU
JDK-8343343	21	Misc crash dump improvements on more platforms after JDK-8294160	PSU
JDK-8343378	17, 21	Exceptions in javax/management DeadLockTest.java do not cause test failure	PSU
JDK-8343396	21	Use OperatingSystem, Architecture, and OSVersion in jpackage tests	PSU
JDK-8343491	17, 21	javax/management/remote/mandatory/connection/DeadLockTest.java failing with NoSuchObjectException: no such object in table	PSU
JDK-8343599	11, 17, 21	Kmem limit and max values swapped when printing container information	PSU
JDK-8343724	17	[PPC64] Disallow OptoScheduling	PSU
JDK-8343882	17, 21	BasicAnnoTests doesn't handle multiple annotations at the same position	PSU
JDK-8344275	21	tools/jpackage/windows/Win8301247Test.java fails on localized Windows platform	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8344326	21	Move jpackage tests from "jdk.jpackage.tests" package to the default package	PSU
JDK-8344361	24	Restore null return for invalid services from legacy providers	PSU
JDK-8344581	17, 21	[TESTBUG] java/awt/Robot/ScreenCaptureRobotTest.java failing on macOS	PSU
JDK-8344589	11, 17, 21	Update IANA Language Subtag Registry to Version 2024-11-19	PSU
JDK-8344646	17, 21	The libsig deprecation warning should go to stderr not stdout	PSU
JDK-8345296	17, 21	AArch64: VM crashes with SIGILL when prctl is disallowed	PSU
JDK-8345368	17, 21	java/io/File/createTempFile/SpecialTempFile.java fails on Windows Server 2025	PSU
JDK-8345375	17, 21	Improve debuggability of test/jdk/java/net/Socket/CloseAvailable.java	PSU
JDK-8345414	17, 21	Google CAInterop test failures	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8345468	17, 21	test/jdk/javafx/swing/JScrollBar/4865918 /bug4865918.java fails in ubuntu22.04	PSU
JDK-8345569	21	[ubsan] adjustments to filemap.cpp and virtualspace.cpp for macOS aarch64	PSU
JDK-8345614	21, 24	Improve AnnotationFormatError message for duplicate annotation interfaces	PSU
JDK-8345676	21	[ubsan] ProcessImpl_md.c:561:40: runtime error: applying zero offset to null pointer on macOS aarch64	PSU
JDK-8345684	21, 24	OperatingSystemMXBean.getSystemCpuLoad() throws NPE	PSU
JDK-8345750	21	Shenandoah: Test TestJcmdHeapDump.java#aggressive intermittent assert(gc_cause() == GCCause::_no_gc) failed: Over-writing cause	PSU
JDK-8345959	24	Make JVM_IsStaticallyLinked JVM_LEAF	PSU
JDK-8346055	17, 21	javafx/swing/text/StyledEditorKit/4506788 /bug4506788.java fails in ubuntu22.04	PSU
JDK-8346082	24	Output JVMTI agent information in hserr files	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8346108	21	[21u][BACKOUT] 8337994: [REDO] Native memory leak when not recording any events	PSU
JDK-8346140	8	[8u] tools/jar/ExtractFilesTest.java and tools/jar/MultipleManifestTest.java fails with jtreg5.1	PSU
JDK-8346239	24	Improve memory efficiency of JimageDiffGenerator	PSU
JDK-8346324	17, 21, 24	javax/swing/JScrollBar/4865918/bug4865918.java fails in CI	PSU
JDK-8346671	17, 21	java/nio/file/Files/probeContentType/Basic.java fails on Windows 2025	PSU
JDK-8346688	24	GenShen: Missing metadata trigger log message	PSU
JDK-8346690	24	Shenandoah: Fix log message for end of GC usage report	PSU
JDK-8346712	24	Remove com/sun/net/httpserver/TcpNoDelayNotRequired.java test	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8346713	21, 24	[testsuite] NeverActAsServerClassMachine breaks TestPLABAdaptToMinTLABSize.java TestPinnedHumongousFragmentation.java a TestPinnedObjectContents.java	PSU
JDK-8346828	17, 21	javax/swing/JScrollBar/4865918/bug486 5918.java still fails in CI	PSU
JDK-8346847	21	[s390x] minimal build failure	PSU
JDK-8346868	24	RISC-V: compiler/sharedstubs tests fail after JDK-8332689	PSU
JDK-8346880	21	[aix] java/lang/ProcessHandle/InfoTest.java still fails: "reported cputime less than expected"	PSU
JDK-8346881	21	[ubsan] logSelection.cpp:154:24 / logSelectionList.cpp:72:94 : runtime error: applying non-zero offset 1 to null pointer	PSU
JDK-8346887	17, 21, 24	DrawFocusRect() may cause an assertion failure	PSU
JDK-8346908	17	Update JDK 17 javadoc man page	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8346972	17, 21	Test java/nio/channels/FileChannel/LoopingTruncate.java fails sometimes with IOException: There is not enough space on the disk	PSU
JDK-8347038	21	[JMH] jdk.incubator.vector.SpiltReplicate fails NoClassDefFoundError	PSU
JDK-8347124	24	Clean tests with --enable-linkable-runtime	PSU
JDK-8347129	21, 24	cpuset cgroups controller is required for no good reason	PSU
JDK-8347171	21	(dc) java/nio/channels/DatagramChannel/InterruptibleOrNot.java fails with virtual thread factory	PSU
JDK-8347256	21, 24	Epsilon: Demote heap size and AlwaysPreTouch warnings to info level	PSU
JDK-8347267	21	[macOS]: UnixOperatingSystem.c:67:40: runtime error: division by zero	PSU
JDK-8347268	21	[ubsan] logOutput.cpp:357:21: runtime error: applying non-zero offset 1 to null pointer	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8347299	24	Add annotations to test cases in LicenseTest	PSU
JDK-8347334	24	JimageDiffGenerator code clean-ups	PSU
JDK-8347424	17, 21, 24	Fix and rewrite sun/security/x509/DNSName/LeadingPeriod.java test	PSU
JDK-8347427	11, 17, 21	JTabbedPane/8134116/Bug8134116.java has no license header	PSU
JDK-8347496	24	Test jdk/jfr/jvm/TestModularImage.java fails after JDK-8347124: No javac	PSU
JDK-8347506	24	Compatible OCSP readtimeout property with OCSP timeout	PSU
JDK-8347564	24	ZGC: Crash in DependencyContext::clean_unloading_dependents	PSU
JDK-8347576	21	Error output in libjsound has non matching format strings	PSU
JDK-8347740	17, 21	java/io/File/createTempFile/SpecialTempFile.java failing	PSU
JDK-8347911	21, 24	Limit the length of inflated text chunks	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8348211	8	[8u] sun/management/jmxremote/startstop/JMXStartStopTest.java fails after backport of JDK-8066708	PSU
JDK-8348562	21, 24	ZGC: segmentation fault due to missing node type check in barrier elision analysis	PSU
JDK-8348600	24	Update PipeWire to 1.3.81	PSU
JDK-8348625	17, 21	[21u, 17u] Revert JDK-8185862 to restore old java.awt.headless behavior on Windows	PSU
JDK-8348675	17, 21	TrayIcon tests fail in Ubuntu 24.10 Wayland	PSU
JDK-8349039	21	Adjust exception No type named <ThreadType> in database	PSU
JDK-8349058	24	'internal proprietary API' warnings make javac warnings unusable	PSU
JDK-8349084	24	Update vectors used in several PQC benchmarks	PSU
JDK-8349166	8	Bad indentation in backport of JDK-8250825	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8349183	24	[BACKOUT] Optimization for StringBuilder append boolean & null	PSU
JDK-8349239	24	[BACKOUT] Reuse StringLatin1::putCharsAt and StringUTF16::putCharsAt	PSU
JDK-8349365	17, 21	[CRaC] Handle javaagent adding jars to bootstrap/system classpath	PSU
JDK-8349560	17, 21	[CRaC] Close EPoll FDs when FD policies close registered sockets	PSU
JDK-8349819	17, 21, 24	[CRaC] Support FD policy reopen on listening socket	PSU
JDK-8350088	24	[CRaC] Stop & restart JFR recording on checkpoint	PSU
JDK-8350569	24	[CRaC] Log level of 'crac' cannot be changed on checkpoint	PSU
JDK-8350816	8	[8u] Update TzdbZoneRulesCompiler to ignore HST/EST/MST links	PSU
JDK-8350820	24	OperatingSystemMXBean CpuLoad() methods return -1.0 on Windows	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8353064	24	[CRaC] ProblemList jdk/crac/LinkedCleanableRefTest	PSU

OpenJFX Fixes and Enhancements

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

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8347937	8, 11, 17, 21, 24	Canvas pattern test fails and crashes on WebKit 620.1	CPU,PSU
JDK-8304008	24	Update README.md and CONTRIBUTING.md for jfx update repos	PSU
JDK-8340322	8, 11, 17, 24	Update WebKit to 620.1	PSU
JDK-8343630	8	Pass AccessControlContext to/from WebKit as opaque object	PSU
JDK-8348744	8, 11, 17	Application window not always activated on macOS 15	PSU
JDK-8349256	24	Update PipeWire to 1.3.81	PSU
JDK-8349891	8, 11, 17, 24	Not implemented function should have printf	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8349924	8, 11, 17, 24	Additional WebKit 620.1 fixes from WebKitGTK 2.46.6	PSU
JDK-8350437	24	[GHA] Update gradle wrapper-validation action to v3	PSU
JDK-8351264	8, 11, 17, 24	Some images don't load with WebKit 620.1	PSU
JDK-8351368	24	RichTextArea: exception pasting from Word	PSU
JDK-8351653	8, 11, 17, 24	Webkit debug build failure after update to 620.1	PSU

Fixes and Enhancements Specific to Azul Zulu Builds of OpenJDK

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

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-61544	21	Revert a Shift_JIS map removal 8229960	CPU,PSU
ZULU-71518	17	Update JFX to zulu22.0.4+103	CPU,PSU
ZULU-71521	21	Update JFX to zulu23.0.1.0.101+101	CPU,PSU
ZULU-74133	21	Revert JDK-8292818 due to performance regression	CPU,PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-74276	11	Update JFX to zulu19.0.10.0.101+101	CPU,PSU
ZULU-74277	17	Update JFX to zulu22.0.4.0.101+101	CPU,PSU
ZULU-74278	21	Update JFX to zulu23.0.2.0.101+102	CPU,PSU
ZULU-74279	8	Update JFX to zulu8u451-b03	CPU,PSU
ZULU-55861	8, 11, 17, 21	Update Redistributable Runtime DLLs to 14.40.33807	PSU
ZULU-68899	11, 17	Clean up non-component FIPS code	PSU
ZULU-69756	17, 21	Integrate CRaC support of S3 as the image storage	PSU
ZULU-70008	17	Conditionally disable a part of JDK-8182043 with a system property	PSU
ZULU-70199	8, 11	Windows build fails because of cl.exe returns nothing	PSU
ZULU-70207	8, 11	VS2017 build missing vcruntime140_1.dll	PSU
ZULU-70743	8	remove WITH_FIPS from zulu8 dependencies	PSU
ZULU-70762	21	verpatch failed to get version info from libffi.dll	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-70791	8	zulu8-emb for QNX contains empty diz file	PSU
ZULU-71513	8	Update JFX to zulu8u442-b03	PSU
ZULU-71590	17, 21	Zulu build failure after ZULU-70766	PSU
ZULU-72348	17, 21, 24	Container tests are failing on Alpine (musl)	PSU
ZULU-72496	8	[8u] VS2017 build missing vcruntime140_1.dll	PSU
ZULU-73629	17, 21, 24	Warp does not pre-allocate sufficient memory for many mmaped files	PSU
ZULU-73632	17, 21	Jenkins build failure after ZULU-70767	PSU
ZULU-73663	17	Zulu build failure after ZULU-70766	PSU
ZULU-73664	8, 11, 17	Update BC-FIPS library to v2.1	PSU
ZULU-74105	11, 17	[fips] bcfips.properties has ":" as delimiter for windows bundles	PSU
ZULU-74306	11	Update JFX to zulu19.0.11+100	PSU
ZULU-74307	17	Update JFX to zulu22.0.5+100	PSU
ZULU-74308	21	Update JFX to zulu23.0.3+100	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-74309	8	Update JFX to zulu8u452-b01	PSU
ZULU-74325	24	Update JFX to zulu24.0.1+100	PSU

Fixes and Enhancements Specific to Azul Zulu Builds of OpenJDK With JavaFX

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

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-74132	8, 11, 17	EXCEPTION_ACCESS_VIOLATION during regression test after webkit 620.1 update	CPU,PSU
ZULU-73871	8, 11, 17	CanvasTest.java failed to build after Webkit 620.1 update	PSU

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