



Azul Zulu builds of OpenJDK

July 2024 Quarterly Update

Release Notes

Revision 1.0

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Revision History

Revision	Date	Description
0.1	July 16, 2024	Initial version of the document.
0.2	July 16, 2024	Content changes.
1.0	July 16, 2024	Added CVE info.

Release Details

This release is a July 2024 quarterly update release for Azul Zulu Builds of OpenJDK version 22, 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	
22.32.15 (CA) 22.32.16 (SA)	PSU	22.0.2+9	22.30	22.0.1+8	22.0.2+101
21.35.18 (SA)	CPU	21.0.3.0.101+4	21.34	21.0.3+9	22.0.1.0.101+100
21.36.17 (CA) 21.36.18 (SA)	PSU	21.0.4+7	21.35	21.0.3.0.101+4	22.0.2+101
17.51.16 (SA)	CPU	17.0.11.0.101+3	17.50	17.0.11+9	22.0.1.0.101+100
17.52.17 (CA) 17.52.18 (SA)	PSU	17.0.12+7	17.51	17.0.11.0.101+3	22.0.2+101
11.73.14 (SA)	CPU	11.0.23.0.101+2	11.72	11.0.23+9	19.0.7.0.101+100
11.74.15 (CA) 11.74.16 (SA)	PSU	11.0.24+8	11.73	11.0.23.0.101+2	19.0.8+101
8.79.0.14 (SA)	CPU	8u421-b02	8.78	8u412-b08	8u421-b01
8.80.0.17 (CA) 8.80.0.18 (SA)	PSU	8u422-b05	8.79	8u421-b02	8u422-b02

7.71.0.18 (SA)	CPU	7u431-b04	7.69	7u421-b02	N/A
6.65.0.16 (SA)	CPU	6b165	6.63	6b163	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 doesn't have to include specific licenses and that such use doesn't 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.

What's New

Support for QNX 7.1 in Azul Zulu 8

QNX 7.0 is updated to QNX 7.1 for Azul Zulu 8. This configuration is tested on AM335x

ARM Cortex-A8-based boards.

SBOM for Azul Zulu Builds

Software Bill Of Material (SBOM) is now available for all Azul Zulu Builds of OpenJDK. These SBOMs are provided in the [CycloneDX format](#) and describe what was used next to the standard OpenJDK to build the Azul Zulu binaries. An SBOM is essential for the software supply chain compliance and security monitoring processes. SBOMs are available to Azul customers via the Azul Support team."

CustomJSSE for Azul Zulu Builds 21

Starting from this release, Custom Security Providers are now available for Azul Zulu Builds of OpenJDK for Java 21. Previously, they were only available for Java 11 and 17. Custom Security Providers enable custom extensions to the standard Java SE security mechanisms (such as the [FIPS 140-2](#) compliance mode).

New Property for ZIP64

Recent improvements related to the validation of the ZIP64 Extra Fields may trigger errors in ZipFileSystem during the processing of some archives that do not conform with the ZIP-specification. To provide backwards compatibility, and to allow you to suppress the validation errors, a new property is introduced:

```
jdk.compatibility.nio.zipfs.disableZip64ExtraFieldValidation.
```

Dependencies Updates for Zulu Builds with OpenJFX DEB Packages

The list of dependencies has been updated for the DEB packages of Azul Zulu Builds of OpenJDK With OpenJFX. This cleanup removes dependencies on transitional packages and allows Zulu FX DEB packages to install on Ubuntu 24.04:

- `libgl1-mesa-glx` removed.
- `libpango1.0-0` changed to `libpango-1.0-0`.
- `libgdk-pixbuf2.0-0` changed to `libgdk-pixbuf-2.0-0` | `libgdk-`

`pixbuf2.0-0.`

Notification of Changes

The following configuration changes are applied. That doesn't mean Azul doesn't accept support requests for Zulu on these platforms, you are still fully covered even if you keep using them. However, it means that testing on these platforms gets reduced. If you're still using this platform, please let us know at support@azul.com.

Reduced Testing in this Release

In this release, Azul reduced the priority of testing Zulu for the following environment:

- JavaFX support on CentOS 6
- Wind River Platform

Notification of Upcoming Changes

In the next release (October 2024 Quarterly Update Release), Azul will reduce the priority of testing Zulu for the following environments:

- RHEL 7
- Debian 10

Toolchain Changes

Toolchain Changes for Windows

After July 2024, Azul Zulu Builds, versions 6 and 7, for Windows are compiled with Microsoft Visual Studio 2017.

Toolchain Changes for macOS

The toolchain used to build Azul Zulu 8 and Azul Zulu 11 on macOS x86_64 has been upgraded from Xcode 11.3.1 to Xcode 12.3.



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	22
Windows (x86 32/64-bit)							
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	n/a	✓	✓✓	✓✓	✓✓	✓✓ [1]	✓✓ [1]
RHEL 8.x	✓	✓	✓✓	✓✓	✓✓	✓✓ [1]	✓✓ [1]
RHEL 7.x	✓	✓	✓✓	✓✓	✓✓	✓✓ [1]	✓✓ [1]
SLES 15	✓	✓	✓✓	✓✓	✓✓	✓✓ [1]	✓✓ [1]
SLES 12	✓	✓	✓✓	✓✓	✓✓	✓✓ [1]	✓✓ [1]
CentOS Stream	✓	✓	✓✓	✓✓	✓✓	✓✓ [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]
Debian 10	✓	✓	✓✓	✓✓	✓✓	✓✓ [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	n/a	n/a	✓	✓	✓	✓	✓
Amazon Linux 2023	n/a	n/a	✓	✓	✓	✓	✓
Linux (ARM 64-bit)							

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	n/a	n/a					
Amazon Linux 2023	n/a	n/a					
Linux with kernel 3.10.x and glibc 2.23 [2] [3]	n/a	n/a			n/a	n/a	n/a
Linux (ARM 32-bit Hard-Float)							
Ubuntu 18.04 [4]	n/a	n/a				n/a	n/a
Raspbian 10 Buster [4]	n/a	n/a				n/a	n/a
Raspbian 9 Stretch [4]	n/a	n/a			n/a	n/a	n/a
Linux with kernel 3.10.x and glibc 2.9 [4] [5]	n/a	n/a			n/a	n/a	n/a
Linux (ARM 32-bit Soft-Float) [6]							
Linux with kernel 2.6.34 and glibc 2.5 [7]	n/a	n/a			n/a	n/a	n/a
Debian 7 Wheezy [8]	n/a	n/a			n/a	n/a	n/a
Linux with kernel 3.10.x and glibc 2.9 [8]	n/a	n/a			n/a	n/a	n/a
Linux (MIPS 32-bit) [9]							
Linux with kernel 4.9.59 and glibc 2.9 [10]	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 [11]	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 [12]	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 12+	n/a	✓	✓✓	✓✓	✓✓	✓✓	✓✓
MacOS (Apple Silicon)							
macOS 12+	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. Bundles with the Checkpoint/Restore (with the `criu` suffix) functionality require kernel 4.4.0+.
3. Bundles compiled with GCC 9 (with the `gcc9` suffix) require glibc 2.29.
4. 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.
5. Bundles with the CRaM (with the `cr` suffix) functionality require glibc 2.13.
6. 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.
7. Bundles with the C1 compiler. Tested on ARMv5 hardware.
8. Bundles with the C1 compiler were tested on ARMv6 and ARMv7 hardware. Bundles with both C1 and C2 compilers were tested on ARMv7 hardware.
9. MIPS32r2 ISA, Big Endian, FPU in 32-bit mode or equivalent emulation.
10. Linux soft-float O32 MIPS ABI



11. Bundles for this platform were tested on QorIQ® T4240-RDB.






















12. 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 version 17, 21, and 22 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.
-  : 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		22	
	x86 64-bit	ARM 64-bit	x86 64-bit	ARM 64-bit	x86 64-bit	ARM 64-bit
Linux						
Alpine Linux 3.11+						
Windows		n/a		n/a		n/a
macOS						

IANA Time Zone Data Version

This release of Azul Zulu comes with IANA Time Zone Database version **2024a**.

Known Issue

Wildcard Expansion in Zulu 6

In Zulu 6, wildcard expansion for command-line arguments behaves differently because

of an upgrade of the underlying Microsoft Windows library and an incompatible change in Visual Studio 2017 with `setargv.obj`. For example, for an empty current directory, the asterisk (*) wasn't expanded before, but now gets expanded to an empty set of arguments.

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-2024-21147	Hotspot	Multiple	Yes	7.4	Network	High	None	None	Unchanged	High	High	None	22, 21, 17, 11, 8	Note 1
CVE-2024-21140	Hotspot	Multiple	Yes	4.8	Network	High	None	None	Unchanged	Low	Low	None	22, 21, 17, 11, 8, 7, 6	Note 1
CVE-2024-21145	2D	Multiple	Yes	4.8	Network	High	None	None	Unchanged	Low	Low	None	22, 21, 17, 11, 8, 7	Note 1
CVE-2024-21131	Hotspot	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	Low	None	22, 21, 17, 11, 8, 7, 6	Note 1
CVE-2024-21138	Hotspot	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	None	Low	22, 21, 17, 11, 8, 7, 6	Note 1
CVE-2024-21144	Concurrency	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	None	Low	11, 8, 7, 6	Note 2
CVE-2024-27983	Oracle GraalVM for JDK: Node (Node.js)	HTTP/2	Yes	8.2	Network	Low	None	None	Unchanged	None	Low	High	None	

Notes:

ID	Notes
1	This vulnerability can be exploited by using APIs in the specified Component, e.g., through a web service which supplies data to the APIs. This vulnerability also applies to Java deployments that load and run untrusted code (e.g., code that comes from the internet) and rely on the Java sandbox for security.
2	This vulnerability applies to Java deployments that load and run untrusted code (e.g., code that comes from the internet) and rely on the Java sandbox for security. This vulnerability does not apply to Java deployments, typically in servers, that load and run only trusted code (e.g., code installed by an administrator).

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-8320097	6, 7, 8, 11, 17, 21, 22	Improve Image transformations	CPU,PSU
JDK-8323390	6, 7, 8, 11, 17, 21, 22	Enhance mask blit functionality	CPU,PSU
JDK-8325345	8, 11, 17, 21, 22	Enhance Thread handling	CPU,PSU
JDK-8325600	6, 7, 8, 11, 17, 21, 22	Better symbol storage	CPU,PSU
JDK-8327413	11, 17, 21, 22	Enhance compilation efficiency	CPU,PSU

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-7147740	6	add assertions to check stack alignment on VM entry from generated code (x64)	CPU,PSU
JDK-7157073	6	G1: type change size_t to uint for region counts / indexes	CPU,PSU
JDK-8026708	6	guarantee(codelet_size > 0 && (size_t)codelet_size > 2*K) failed: not enough space for interpreter generation	CPU,PSU
JDK-8028539	6, 7	Endless loop in native code of sun.java2d.loops.ScaledBlit	CPU,PSU
JDK-8043264	6, 7	hdsis library not picked up correctly on expected paths	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8043301	6	Duplicate definitions in vm/runtime/sharedRuntimeTrans.cpp versus math.h in VS2013	CPU,PSU
JDK-8081202	6, 7	Hotspot compile warning: "Invalid suffix on literal; C++11 requires a space between literal and identifier"	CPU,PSU
JDK-8150688	6, 7	Fix os_windows siglabel	CPU,PSU
JDK-8196880	6, 7	VS2017 Addition of Global Delete Operator with Size Parameter Conflicts with Arena's Chunk Provided One	CPU,PSU
JDK-8196882	6, 7	VS2017 Hotspot Defined vsnprintf Function Causes C2084 Already Defined Compilation Error	CPU,PSU
JDK-8196884	6, 7	VS2017 Multiple Type Cast Conversion Compilation Errors	CPU,PSU
JDK-8197864	6	VS2017 (C4334) Result of 32-bit Shift Implicitly Converted to 64 bits	CPU,PSU
JDK-8197868	6, 7	VS2017 (C2065) 'timezone': Undeclared Identifier in share/runtime/os.cpp	CPU,PSU
JDK-8202076	6, 7	test/jdk/java/io/File/WinSpecialFiles.java on windows with VS2017	CPU,PSU
JDK-8204872	6, 7	[8u] VS2017: more instances of "error C3680: cannot concatenate user-defined string literals with mismatched literal suffix identifiers"	CPU,PSU
JDK-8205440	6	[8u] DWORD64 required for later Windows compilers	CPU,PSU
JDK-8205677	6, 7	[8u] casts and type change for 8u to enable later Windows compilers	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8206454	6, 7	[8u] os::current_stack_pointer() fails to compile on later Windows compilers (warning C4172: returning address of local variable)	CPU,PSU
JDK-8211124	6, 7	HotSpot vm_version.cpp should recognise updated VS2017	CPU,PSU
JDK-8211714	6, 7	Need to update vm_version.cpp to recognise VS2017 minor versions	CPU,PSU
JDK-8235243	6, 7	handle VS2017 15.9 and VS2019 in abstract_vm_version	CPU,PSU
JDK-8235325	7	build failure on Linux after 8235243	CPU,PSU
JDK-8310923	11	Refactor Currency tests to use JUnit	CPU,PSU
JDK-8334653	11, 17, 21	ISO 4217 Amendment 177 Update	CPU,PSU
JDK-7001133	21	OutOfMemoryError by CustomMediaSizeName implementation	PSU
JDK-8015739	11, 17	Background of JInternalFrame is located out of JInternalFrame	PSU
JDK-8025439	8	[TEST BUG] [macosx] PrintServiceLookup.lookupPrintServices doesn't work properly since jdk8b105	PSU
JDK-8042380	11, 17	Test javax/swing/JFileChooser/4524490/bug4524490.java fails with InvocationTargetException	PSU
JDK-8061729	11	Update java/net tests to eliminate dependency on sun.net.www.MessageHeader and some other internal APIs	PSU
JDK-8069389	8	CompilerOracle prefix wildcarding is broken for long strings	PSU
JDK-8158048	11	Fix failure message from jtreg gtest wrapper	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8159454	8	[TEST_BUG] javax/swing/ToolTipManager/7123767/bug7123767.java: number of checked graphics configurations should be limited	PSU
JDK-8159690	8	[TESTBUG] Mark headful tests with @key headful.	PSU
JDK-8159927	11, 17, 21	Add a test to verify JMOD files created in the images do not have debug symbols	PSU
JDK-8163229	17	several regression tests have a main method that is never executed	PSU
JDK-8163921	11, 17	URLConnection default Accept header is malformed according to HTTP/1.1 RFC	PSU
JDK-8177107	17	Reduce memory footprint of java.lang.reflect.Constructor/Method	PSU
JDK-8185862	17, 21, 22	AWT Assertion Failure in ::GetDIBits(hBMDC, hBM, 0, 1, 0, gpBitmapInfo, 0) 'awt_Win32GraphicsDevice.cpp', at line 185	PSU
JDK-8187759	11, 17, 21, 22	Background not refreshed when painting over a transparent JFrame	PSU
JDK-8198321	8	javax/swing/JEditorPane/5076514/bug5076514.java fails	PSU
JDK-8203691	8	[TESTBUG] Test /runtime/containers/cgroup/PlainRead.java fails	PSU
JDK-8213714	17	AttachingConnector/attach/attach001 failed due to "bind failed: Address already in use"	PSU
JDK-8214400	11	Update hotspot application/jcstress jtreg tests wrappers to use jcstress 0.5	PSU
JDK-8218917	11	KeyEvent.getModifiers() returns inconsistent values for ALT keys	PSU
JDK-8220202	11	Simplify/standardize method naming for HtmlTree	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8223696	17, 21	java/net/httpclient/MaxStreams.java failed with didn't finish within the time-out	PSU
JDK-8235834	8	IBM-943 charset encoder needs updating	PSU
JDK-8238169	22	BasicDirectoryModel getDirectories and DoChangeContents.run can deadlock	PSU
JDK-8239965	8	XMLEncoder/Test4625418.java fails due to "Error: Cp943 - can't read properly"	PSU
JDK-8240756	8	[macos] SwingSet2:TableDemo:Printed Japanese characters were garbled	PSU
JDK-8241951	11	SA core file tests failed to find core file for signed binaries on OSX 10.15	PSU
JDK-8243010	11	Test support: Customizable Hex Printer	PSU
JDK-8248194	11	Need better support for running SA tests on core files	PSU
JDK-8253980	11	javax/swing/plaf/synth/7158712/bug7158712.java fails on windows	PSU
JDK-8255031	11	Update java/util/prefs/AddNodeChangeListener.java to report more failure info	PSU
JDK-8256152	8	tests fail because of ambiguous method resolution	PSU
JDK-8256660	11, 17	Disable DTLS 1.0	PSU
JDK-8258855	8	Two tests sun/security/krb5/auto/ReplayCacheTestProc.java and ReplayCacheTestProcWithMD5.java failed on OL8.3	PSU
JDK-8259866	21	two java.util tests failed with "IOException: There is not enough space on the disk"	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8260540	17	serviceability/jdwp/AllModulesCommandTest.java failed with "Debuggee error: 'ERROR: transport error 202: bind failed: Address already in use'"	PSU
JDK-8261404	11	Class.getReflectionFactory() is not thread-safe	PSU
JDK-8261433	22	Better pkcs11 performance for libpkcs11:C_EncryptInit/libpkcs11:C_DecryptInit	PSU
JDK-8262017	8	C2: assert(n != __null) failed: Bad immediate dominator info.	PSU
JDK-8263659	11	Reflow GTestResultParser for better readability	PSU
JDK-8263940	11, 17	NPE when creating default file system when default file system provider is packaged as JAR file on class path	PSU
JDK-8264152	11	javax/net/ssl/DTLS/RespondToRetransmit.java timed out	PSU
JDK-8264322	17	Generate CDS archive when creating custom JDK image	PSU
JDK-8266242	17, 21	java/awt/GraphicsDevice/CheckDisplayModes.java failing on macOS 11 ARM	PSU
JDK-8267796	11, 17	vmTestbase/nsk/jvmti/scenarios/hotswap/HS201/hs201t002/TestDescription.java fails with NoClassDefFoundError	PSU
JDK-8267938	11	(sctp) SCTP channel factory methods should check platform support	PSU
JDK-8268916	8	Tests for AffirmTrust roots	PSU
JDK-8268974	11, 17	GetJREPath() JLI function fails to locate libjava.so if not standard Java launcher is used	PSU
JDK-8269258	11	java/net/httpclient/ManyRequestsLegacy.java failed with connection timeout	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8269914	17	Factor out heap printing for G1 young and full gc	PSU
JDK-8270018	17	Add scoped object for g1 young gc JFR notification	PSU
JDK-8270199	11	Most SA tests are skipped on macosx-aarch64 because all executables are signed	PSU
JDK-8272315	17	Improve assert_different_registers	PSU
JDK-8272651	17	G1 heap region info print order changed by JDK-8269914	PSU
JDK-8272916	17	Copyright year was modified unintentionally in jlink.properties and ImagePluginStack.java	PSU
JDK-8273153	11, 17	Consolidate file_exists into os:file_exists	PSU
JDK-8273774	17	CDSPluginTest should only expect classes_nocoops.jsa exists on supported 64-bit platforms	PSU
JDK-8273831	11	PrintServiceLookup spawns 2 threads in the current classloader, getting orphaned	PSU
JDK-8273979	17	move some os time related functions to os_posix for POSIX platforms	PSU
JDK-8275334	17	Move class loading Events to a separate section in hs_err files	PSU
JDK-8275868	17	ciReplay: Inlining fails with "unloaded signature classes" due to wrong protection domains	PSU
JDK-8276125	11	RunThese24H.java SIGSEGV in JfrThreadGroup::thread_group_id	PSU
JDK-8276227	17	ciReplay: SIGSEGV if classfile for replay compilation is not present after JDK-8275868	PSU
JDK-8276932	17	G1: Annotate methods with override explicitly in g1CollectedHeap.hpp	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8278067	8	Make HttpURLConnection default keep alive timeout configurable	PSU
JDK-8278527	21	java/util/concurrent/tck/JSR166TestCase.java fails nanoTime test	PSU
JDK-8278893	17	Parallel: Remove GCWorkerDelayMillis	PSU
JDK-8280030	17	[REDO] Parallel: More precise boundary in ObjectStartArray::object_starts_in_range	PSU
JDK-8280056	17, 21	gtest/LargePageGtests.java#use-large-pages failed "os.release_one_mapping_multi_commits_vm"	PSU
JDK-8280113	17	(dc) DatagramSocket.receive does not always throw when the channel is closed	PSU
JDK-8280377	17	MethodHandleProxies does not correctly invoke default methods with varargs	PSU
JDK-8280546	11, 17	Remove hard-coded 127.0.0.1 loopback address	PSU
JDK-8280835	17	jdk/javadoc/tool/CheckManPageOptions.java depends on source hierarchy	PSU
JDK-8281507	11	Two javac tests have bad jtreg <code>@clean</code> tags	PSU
JDK-8281658	17, 21	Add a security category to the java -XshowSettings option	PSU
JDK-8282017	11	sun/net/www/protocol/https/HttpsURLConnection/B6216082.java fails with "SocketException: Unexpected end of file from server"	PSU
JDK-8282094	17	[REDO] Parallel: Refactor PSCardTable::scavenge_contents_parallel	PSU
JDK-8283349	11, 17	Robustness improvements to java/util/prefs/AddNodeChangeListener.jar	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8285452	17	Add a new test library API to replace a file content using FileUtils.java	PSU
JDK-8286045	17	Use ForceGC for cleaner test cases	PSU
JDK-8286311	17	remove boilerplate from use of runTests	PSU
JDK-8286705	11	GCC 12 reports use-after-free potential bugs	PSU
JDK-8286740	17	JFR: Active Setting event emitted incorrectly	PSU
JDK-8286781	17	Replace the deprecated/obsolete gethostbyname and inet_addr calls	PSU
JDK-8288936	21	Wrong lock ordering writing G1HeapRegionTypeChange JFR event	PSU
JDK-8288989	21	Make tests not depend on the source code	PSU
JDK-8289401	17	Add dump output to TestRawRSACipher.java	PSU
JDK-8289643	17	File descriptor leak with ProcessBuilder.startPipeline	PSU
JDK-8290126	17	Add a check in JavadocTester for "javadoc should not crash"	PSU
JDK-8290203	11	ProblemList vmTestbase/nsk/jvmti/scenarios/capability/CM03/cm03t001/TestDescription.java on linux-all	PSU
JDK-8290885	17	java/lang/ProcessBuilder/PipelineLeaksFD.java fail: More or fewer pipes than expected	PSU
JDK-8290901	17	Reduce use of -source in langtools tests	PSU
JDK-8291226	8	Create Test Cases to cover scenarios for JDK-8278067	PSU
JDK-8291637	8	HttpClient default keep alive timeout not followed if server sends invalid value	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8291638	8	Keep-Alive timeout of 0 should close connection immediately	PSU
JDK-8291753	17	Add JFR event for GC CPU Time	PSU
JDK-8293069	21	Make -XX:+Verbose less verbose	PSU
JDK-8293562	8	KeepAliveCache Blocks Threads while Closing Connections	PSU
JDK-8293563	11	[macos-aarch64] SA core file tests failing with sun.jvm.hotspot.oops.UnknownOopException	PSU
JDK-8293850	21	need a largest_committed metric for each category of NMT's output	PSU
JDK-8293887	11	AArch64 build failure with GCC 12 due to maybe-uninitialized warning in libfdlibm k_rem_pio2.c	PSU
JDK-8294137	11, 17	Review running times of java.math tests	PSU
JDK-8294156	11, 17	Allow PassFailJFrame.Builder to create test UI	PSU
JDK-8294699	17, 21	Launcher causes lingering busy cursor	PSU
JDK-8294985	21	SSL Engine throws IAE during parsing of X500Principal	PSU
JDK-8295026	17	Remove unused fields in StyleSheet	PSU
JDK-8295111	21, 22	dpkg appears to have problems resolving symbolically linked native libraries	PSU
JDK-8295343	11, 17	sun/security/pkcs11 tests fail on Linux RHEL 8.6 and newer	PSU
JDK-8295944	17	Move the Http2TestServer and related classes into a package of its own	PSU
JDK-8296137	17	diags-examples.xml is broken	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8296190	17	TestMD5Intrinsics and TestMD5MultiBlockIntrinsics don't test the intrinsics	PSU
JDK-8296610	17	java/net/URLConnection/SetAuthenticator/HTTTPSetAuthenticatorTest.java failed with "BindException: Address already in use: connect"	PSU
JDK-8297082	11, 17	Remove sun/tools/jhsdb/BasicLauncherTest.java from problem list	PSU
JDK-8297292	17	java/nio/channels/FileChannel/FileExtensionAndMap.java is too slow	PSU
JDK-8297445	17	PPC64: Represent Registers as values	PSU
JDK-8297449	11, 17	Update JInternalFrame Metal Border code	PSU
JDK-8297645	17	Drop the test/jdk/java/net/httpclient/reactivestreams-tck-tests/TckDriver.java test	PSU
JDK-8297695	17	Fix typos in test/langtools files	PSU
JDK-8297798	11	Timeout with DTLSOverDatagram test template	PSU
JDK-8298413	17	[s390] CPUInfoTest fails due to uppercase feature string	PSU
JDK-8298939	17	Refactor open/test/jdk/javax/rmi/ssl/SSLSocketParametersTest.sh to jtreg java test	PSU
JDK-8299023	11, 17, 21	TestPLABResize.java and TestPLABPromotion.java are failing intermittently	PSU
JDK-8299677	11	Formatter.format might take a long time to format an integer or floating-point	PSU
JDK-8299858	11, 17	[Metrics] Swap memory limit reported incorrectly when too large	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8301183	17, 21	(zipfs) jdk/jdk/nio/zipfs/TestLocOffsetFromZip64EF.java failing with ZipException:R0 on OL9	PSU
JDK-8301381	17	Verify DTLS 1.0 cannot be negotiated	PSU
JDK-8302069	11, 17	javax/management/remote/mandatory/notif/Notif ReconnectDeadlockTest.java update	PSU
JDK-8302512	11, 17	Update IANA Language Subtag Registry to Version 2023-02-14	PSU
JDK-8302907	17	[PPC64] Use more constexpr in class Register	PSU
JDK-8303457	17	Introduce convenience test library APIs for creating test servers for tests in test/jdk/java/net/httpclient	PSU
JDK-8303466	8, 11, 17	C2: failed: malformed control flow. Limit type made precise with MaxL/MinL	PSU
JDK-8303525	21	Refactor/cleanup open/test/jdk/javax/rmi/ssl/SSLSocketParameters Test.java	PSU
JDK-8303773	21	Replace "main.wrapper" with "test.thread.factory" property in test code	PSU
JDK-8303891	21	Speed up Zip64SizeTest using a small ZIP64 file	PSU
JDK-8303959	21	tools/jpackage/share/RuntimePackageTest.java fails with java.lang.AssertionError missing files	PSU
JDK-8303972	17, 21	(zipfs) Make test/jdk/jdk/nio/zipfs/TestLocOffsetFromZip64EF. java independent of the zip command line	PSU
JDK-8304074	8	[JMX] Add an approximation of total bytes allocated on the Java heap by the JVM	PSU
JDK-8304761	11, 17	Update IANA Language Subtag Registry to Version 2023-03-22	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8304839	21	Move TestScaffold.main() to the separate class DebugeeWrapper	PSU
JDK-8304927	17	Update java/net/httpclient/BasicAuthTest.java to check basic auth over HTTP/2	PSU
JDK-8305072	22	Win32ShellFolder2.compareTo is inconsistent	PSU
JDK-8305169	17	java/security/cert/CertPathValidator/OCSP/GetAndPostTests.java – test server didn't start in timely manner	PSU
JDK-8305645	11, 17, 21	System Tray icons get corrupted when Windows primary monitor changes	PSU
JDK-8305819	17	LogConfigurationTest intermittently fails on AArch64	PSU
JDK-8305874	11, 17	Open source AWT Key, Text Event related tests	PSU
JDK-8305931	11, 17, 21	jdk/jfr/jcmd/TestJcmdDumpPathToGCRoots.java failed with "Expected chains but found none"	PSU
JDK-8305942	11, 17	Open source several AWT Focus related tests	PSU
JDK-8305943	11, 17	Open source few AWT Focus related tests	PSU
JDK-8305962	11	update jcstress to 0.16	PSU
JDK-8306031	11, 17	Update IANA Language Subtag Registry to Version 2023-04-13	PSU
JDK-8306040	17, 21	HttpResponseInputStream.available() returns 1 on empty stream	PSU
JDK-8306067	11, 17	Open source AWT Graphics, GridBagLayout related tests	PSU
JDK-8306634	11, 17	Open source AWT Event related tests	PSU
JDK-8306714	11, 17	Open source few Swing event and AbstractAction tests	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8306838	11, 17	GetGraphicsTest needs to be headful	PSU
JDK-8306941	11	Open source several datatransfer and dnd AWT tests	PSU
JDK-8307083	11	Open source some drag and drop tests 3	PSU
JDK-8307411	17	Test java/foreign/channels/TestAsyncSocketChannels.java failed: IllegalStateException: Already closed	PSU
JDK-8307423	17	[s390x] Represent Registers as values	PSU
JDK-8307955	11	Prefer to PTRACE_GETREGSET instead of PTRACE_GETREGS in method 'ps_proc.c::process_get_lwp_regs'	PSU
JDK-8308021	11, 17	Update IANA Language Subtag Registry to Version 2023-05-11	PSU
JDK-8308144	21	Uncontrolled memory consumption in SSLFlowDelegate.Reader	PSU
JDK-8308453	21	Convert JKS test keystores in test/jdk/javax/net/ssl/etc to PKCS12	PSU
JDK-8309142	21	Refactor test/langtools/tools/javac/versions/Versions.java	PSU
JDK-8309218	22	java/util/concurrent/locks/Lock/OOMEInAQS.java still times out with ZGC, Generational ZGC, and SerialGC	PSU
JDK-8309409	17	Update HttpInputStreamTest and BodyProcessorInputStreamTest to use hg.openjdk.org	PSU
JDK-8309527	17	Improve test proxy performance	PSU
JDK-8309630	17	Clean up tests that reference deploy modules	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8309752	21	com/sun/jdi/SetLocalWhileThreadInNative.java fails with virtual test thread factory due to OpaqueFrameException	PSU
JDK-8309757	21	com/sun/jdi/ReferrersTest.java fails with virtual test thread factory	PSU
JDK-8309763	17, 21	Move tests in test/jdk/sun/misc/URLClassPath directory to test/jdk/jdk/internal/loader	PSU
JDK-8309871	21	jdk/jfr/api/consumer/recordingstream/TestSetEndTime.java timed out	PSU
JDK-8309890	17, 21	TestStringDeduplicationInterned.java waits for the wrong condition	PSU
JDK-8310031	17	Parallel: Implement better work distribution for large object arrays in old gen	PSU
JDK-8310070	21	Test: javax/net/ssl/DTLS/DTLSWontNegotiateV10.java timed out	PSU
JDK-8310072	22	JComboBox/DisabledComboBoxFontTestAuto: Enabled and disabled ComboBox does not match in these LAFs: GTK+	PSU
JDK-8310228	21	Improve error reporting for uncaught native exceptions on Windows	PSU
JDK-8310234	21	Refactor Locale tests to use JUnit	PSU
JDK-8310355	21	Move the stub test from initialize_final_stubs() to test/hotspot/gtest	PSU
JDK-8310380	11	Handle problems in core-related tests on macOS when codesign tool does not work	PSU
JDK-8310513	21, 22	[s390x] Intrinsicify recursive ObjectMonitor locking	PSU
JDK-8310731	21	Configure a javax.net.ssl.SNIMatcher for the HTTP/1.1 test servers in java/net/httpclient tests	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8310818	11, 17, 21	Refactor more Locale tests to use JUnit	PSU
JDK-8310913	21	Move ReferencedKeyMap to jdk.internal so it may be shared	PSU
JDK-8311792	21	java/net/httpclient/ResponsePublisher.java fails intermittently with AssertionError: Found some outstanding operations	PSU
JDK-8311823	21	JFR: Uninitialized EventEmitter::_thread_id field	PSU
JDK-8311881	21	jdk/javax/swing/ProgressMonitor/ProgressTest.java does not show the ProgressMonitorInputStream all the time	PSU
JDK-8311893	17	Interactive component with ARIA role 'tabpanel' does not have a programmatically associated name	PSU
JDK-8311964	17, 21	Some jtreg tests failing on x86 with error 'unrecognized VM options' (C2 flags)	PSU
JDK-8312014	21	[s390x] TestSigInfoInHsErrFile.java Failure	PSU
JDK-8312194	11, 17, 21	test/hotspot/jtreg/applications/ctw/modules/jdk_crypto_ec.java cannot handle empty modules	PSU
JDK-8312218	21	Print additional debug information when hitting assert(in_hash)	PSU
JDK-8312320	17, 21	Remove javax/rmi/ssl/SSLSocketParametersTest.sh from ProblemList	PSU
JDK-8312383	11, 17, 21, 22	Log X509ExtendedKeyManager implementation class name in TLS/SSL connection	PSU
JDK-8312498	21	Thread::getState and JVM TI GetThreadState should return TIMED_WAITING virtual thread is timed parked	PSU
JDK-8312777	21	notifyJvmtiMount before notifyJvmtiUnmount	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8312916	17	Remove remaining usages of -Xdebug from test/hotspot/jtreg	PSU
JDK-8313081	8	MonitoringSupport_lock should be unconditionally initialized after 8304074	PSU
JDK-8313206	11	PKCS11 tests silently skip execution	PSU
JDK-8313307	17	java/util/Formatter/Padding.java fails on some Locales	PSU
JDK-8313394	21	Array Elements in OldObjectSample event has the incorrect description	PSU
JDK-8313612	21	Use JUnit in lib-test/jdk tests	PSU
JDK-8313702	11, 17, 21	Update IANA Language Subtag Registry to Version 2023-08-02	PSU
JDK-8313710	21	jcmod: typo in the documentation of JFR.start and JFR.dump	PSU
JDK-8313899	21	JVMCI exception Translation can fail in TranslatedException.<clinit>	PSU
JDK-8314164	22	java/net/URLConnection/URLConnectionExpectContinueTest.java fails intermittently in timeout	PSU
JDK-8314220	11	Configurable InlineCacheBuffer size	PSU
JDK-8314275	22	Incorrect stepping in switch	PSU
JDK-8314283	11, 17	Support for NSS tests on aarch64 platforms	PSU
JDK-8314552	11	Fix javadoc tests to work with jtreg 7	PSU
JDK-8314573	21	G1: Heap resizing at Remark does not take existing eden regions into account	PSU
JDK-8314824	21	Fix serviceability/jvmti/8036666/GetObjectLockCount.java to use vm flags	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8314828	21	Mark 3 jcmd command-line options test as vm.flagless	PSU
JDK-8314830	11	runtime/ErrorHandling/ tests ignore external VM flags	PSU
JDK-8314832	17, 21	Few runtime/os tests ignore vm flags	PSU
JDK-8314835	17	gtest wrappers should be marked as flagless	PSU
JDK-8314975	21	JavadocTester should set source path if not specified	PSU
JDK-8315071	11, 17, 21	Modify TrayIconScalingTest.java, PrintLatinCJKTest.java to use new PassFailJFrame's builder pattern usage	PSU
JDK-8315117	11, 17, 21	Update Zlib Data Compression Library to Version 1.3	PSU
JDK-8315373	21	Change VirtualThread to unmount after freezing, re-mount before thawing	PSU
JDK-8315485	21	(fs) Move java/nio/file/Path/Misc.java tests into java/nio/file/Path/PathOps.java	PSU
JDK-8315503	21	G1: Code root scan causes long GC pauses due to imbalanced iteration	PSU
JDK-8315559	21	Delay TempSymbol cleanup to avoid symbol table churn	PSU
JDK-8315605	21	G1: Add number of nmethods in code roots scanning statistics	PSU
JDK-8315609	11, 17, 21	Open source few more swing text/html tests	PSU
JDK-8315652	17, 21	RISC-V: Features string uses wrong separator for jtreg	PSU
JDK-8315663	11, 17, 21	Open source misc awt tests	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8315677	11, 17, 21	Open source few swing JFileChooser and other tests	PSU
JDK-8315726	11, 17	Open source several AWT applet tests	PSU
JDK-8315741	11, 17, 21	Open source few swing JFormattedTextField and JPopupMenu tests	PSU
JDK-8315824	11, 17, 21	Open source several Swing Text/HTML related tests	PSU
JDK-8315834	11, 17, 21	Open source several Swing JSpinner related tests	PSU
JDK-8315889	11, 17, 21	Open source several Swing HTMLDocument related tests	PSU
JDK-8315898	17, 21	Open source swing JMenu tests	PSU
JDK-8315998	21	Remove dead ClassLoaderDataGraphKlassIteratorStatic	PSU
JDK-8316002	21	Remove unnecessary seen_dead_loader in ClassLoaderDataGraph::do_unloading	PSU
JDK-8316017	11, 17	Refactor timeout handler in PassFailJFrame	PSU
JDK-8316053	11, 17, 21	Open some swing tests 3	PSU
JDK-8316138	8, 11, 17, 21, 22	Add GlobalSign 2 TLS root certificates	PSU
JDK-8316142	11, 17	Enable parallelism in vmTestbase/nsk/monitoring/stress/lowmem tests	PSU
JDK-8316154	11, 17, 21	Opensource JTextArea manual tests	PSU
JDK-8316164	11, 17, 21	Opensource JMenuBar manual test	PSU
JDK-8316186	17, 21	RISC-V: Remove PlatformCmpxchg<4>	PSU
JDK-8316228	21	jcmm tests are broken by 8314828	PSU
JDK-8316242	11, 17, 21	Opensource SwingGraphics manual test	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8316328	22	Test jdk/jfr/event/oldobject/TestSanityDefault.java times out for some heap sizes	PSU
JDK-8316451	21	6 java/lang/instrument/PremainClass tests ignore VM flags	PSU
JDK-8316460	21	4 javax/management tests ignore VM flags	PSU
JDK-8316462	17	sun/jvmsstat/monitor/MonitoredVm/MonitorVmStartTerminate.java ignores VM flags	PSU
JDK-8316559	21	Refactor some util/Calendar tests to JUnit	PSU
JDK-8316563	17, 21	test tools/jpackage/linux/LinuxResourceTest.java fails on CentOS Linux release 8.5.2111 and Fedora 27	PSU
JDK-8316608	11, 17, 21	Enable parallelism in vmTestbase/gc/vector tests	PSU
JDK-8316669	21	ImmutableOopMapSet destructor not called	PSU
JDK-8316670	21	Remove effectively unused nmethodBucket::_count	PSU
JDK-8316696	21	Remove the testing base classes: IntlTest and CollatorTest	PSU
JDK-8316924	21	java/lang/Thread/virtual/stress/ParkALot.java times out	PSU
JDK-8316959	21	Improve InlineCacheBuffer pending queue management	PSU
JDK-8317007	21	Add bulk removal of dead nmethods during class unloading	PSU
JDK-8317235	21	Remove Access API use in nmethod class	PSU
JDK-8317287	11, 17, 21	[macos14] InterJVMGetDropSuccessTest.java: Child VM: abnormal termination	PSU
JDK-8317299	22	safepoint scalarization doesn't keep track of the depth of the JVM state	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8317350	21	Move code cache purging out of CodeCache::UnloadingScope	PSU
JDK-8317440	21	Lock rank checking fails when code root set is modified with the Servicelock held after JDK-8315503	PSU
JDK-8317507	8, 11, 17	C2 compilation fails with "Exceeded _node_regs array"	PSU
JDK-8317600	21	VtableStubs::stub_containing() table load not ordered wrt to stores	PSU
JDK-8317631	21	Refactor ChoiceFormat tests to use JUnit	PSU
JDK-8317677	21	Specialize Vtablestubs::entry_for() for VtableBlob	PSU
JDK-8317804	22	com/sun/jdi/JdwpAllowTest.java fails on Alpine 3.17 / 3.18	PSU
JDK-8317809	21	Insertion of free code blobs into code cache can be very slow during class unloading	PSU
JDK-8317965	21	TestLoadLibraryDeadlock.java fails with "Unable to load native library.: expected true, was false"	PSU
JDK-8318109	21	Writing JFR records while a CHT has taken its lock asserts in rank checking	PSU
JDK-8318158	22	RISC-V: implement roundD/roundF intrinsics	PSU
JDK-8318322	11, 17, 21	Update IANA Language Subtag Registry to Version 2023-10-16	PSU
JDK-8318410	8	jdk/java/lang/instrument/BootClassPath/BootClassPathTest.sh fails on Japanese Windows	PSU
JDK-8318455	21	Fix the compiler/sharedstubs/SharedTrampolineTest.java and SharedStubToInterpTest.java	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8318580	11, 17, 21	"javax/swing/MultiMonitor/MultimonVImage.java failing with Error. Can't find library: /open/test/jdk/java/awt/regtesthelpers" after JDK-8316053	PSU
JDK-8318585	21	Rename CodeCache::UnloadingScope to UnlinkingScope	PSU
JDK-8318599	11, 17, 21	URLConnection cache issues leading to crashes in JGSS w/ native GSS introduced by 8303809	PSU
JDK-8318603	22	Parallelize sun/java2d/marlin/ClipShapeTest.java	PSU
JDK-8318696	22	Do not use LFS64 symbols on Linux	PSU
JDK-8318720	21	G1: Memory leak in G1CodeRootSet after JDK-8315503	PSU
JDK-8318727	11, 17, 21	Enable parallelism in vmTestbase/vm/gc/concurrent tests	PSU
JDK-8318757	21	VM_ThreadDump asserts in interleaved ObjectMonitor::deflate_monitor calls	PSU
JDK-8318809	11, 17	java/util/concurrent/ConcurrentLinkedQueue/WhiteBox.java shows intermittent failures on linux ppc64le and aarch64	PSU
JDK-8318854	11, 17, 21	[macos14] Running any AWT app prints Secure coding warning	PSU
JDK-8318962	21	Update ProcessTools javadoc with suggestions in 8315097	PSU
JDK-8318986	21	Improve GenericWaitBarrier performance	PSU
JDK-8319048	17, 21	Monitor deflation unlink phase prolongs time to safepoint	PSU
JDK-8319128	11, 17	sun/security/pkcs11 tests fail on OL 7.9 aarch64	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8319136	11, 17	Skip pkcs11 tests on linux-aarch64	PSU
JDK-8319153	21	Fix: Class is a raw type in ProcessTools	PSU
JDK-8319265	21	TestLoadLibraryDeadlock.java fails on windows-x64 "Unable to load b.jar"	PSU
JDK-8319268	17	Build failure with GCC8.3.1 after 8313643	PSU
JDK-8319338	17, 21	tools/jpackage/share/RuntimeImageTest.java fails with -XX:+UseZGC	PSU
JDK-8319372	17	C2 compilation fails with "Bad immediate dominator info"	PSU
JDK-8319376	21	ParallelGC: Forwarded objects found during heap inspection	PSU
JDK-8319382	22	com/sun/jdi/JdwpAllowTest.java shows failures on AIX if prefixLen of mask is larger than 32 in IPv6 case	PSU
JDK-8319436	11	Proxy.newProxyInstance throws NPE if loader is null and interface not visible from class loader	PSU
JDK-8319437	21	NMT should show library names in call stacks	PSU
JDK-8319548	22	Unexpected internal name for Filler array klass causes error in VisualVM	PSU
JDK-8319567	21	Update java/lang/invoke tests to support vm flags	PSU
JDK-8319568	21	Update java/lang/reflect/exeCallerAccessTest/CallerAccessTest.java to accept vm flags	PSU
JDK-8319571	21	Update jni/nullCaller/NullCallerTest.java to accept flags or mark as flagless	PSU
JDK-8319574	21	Exec/process tests should be marked as flagless	PSU
JDK-8319578	21	Few java/lang/instrument ignore test.java.opts and accept test.vm.opts only	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8319647	21	Few java/lang/System/LoggerFinder/modules tests ignore vm flags	PSU
JDK-8319648	21	java/lang/SecurityManager tests ignore vm flags	PSU
JDK-8319650	21	Improve heap dump performance with class metadata caching	PSU
JDK-8319651	21	Several network tests ignore vm flags when start java process	PSU
JDK-8319672	21	Several classloader tests ignore VM flags	PSU
JDK-8319676	21	A couple of jdk/modules/incubator/ tests ignore VM flags	PSU
JDK-8319677	21	Test jdk/internal/misc/VM/RuntimeArguments.java should be marked as flagless	PSU
JDK-8319713	21	Parallel: Remove PSAdaptiveSizePolicy::should_full_GC	PSU
JDK-8319757	21	java/nio/channels/DatagramChannel/Interruptible OrNot.java failed: wrong exception thrown	PSU
JDK-8319876	21	Reduce memory consumption of VM_ThreadDump::doit	PSU
JDK-8319896	21	Remove monitor deflation from final audit	PSU
JDK-8319955	21	Improve dependencies removal during class unloading	PSU
JDK-8320005	8, 11, 17, 21, 22	Allow loading of shared objects with .a extension on AIX	PSU
JDK-8320061	21	[nmt] Multiple issues with peak accounting	PSU
JDK-8320113	11, 17, 21	[macos14] : ShapeNotSetSometimes.java fails intermittently on macOS 14	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8320129	11, 17, 21	"top" command during jtreg failure handler does not display CPU usage on OSX	PSU
JDK-8320275	21	assert(_chunk->bitmap().at(index)) failed: Bit not set at index	PSU
JDK-8320303	11, 17	Allow PassFailJFrame to accept single window creator	PSU
JDK-8320331	21	G1 Full GC Heap verification relies on metadata not reset before verification	PSU
JDK-8320342	11, 17, 21	Use PassFailJFrame for TruncatedPopupMenuTest.java	PSU
JDK-8320343	21	Generate GIF images for AbstractButton/5049549/bug5049549.java	PSU
JDK-8320349	21	Simplify FileChooserSymLinkTest.java by using single-window testUI	PSU
JDK-8320365	21	IPPPrintService.getAttributes() causes blanket re-initialisation	PSU
JDK-8320370	21	NMT: Change MallocMemorySnapshot to simplify code.	PSU
JDK-8320515	21	assert(monitor->object_peek() != nullptr) failed: Owned monitors should not have a dead object	PSU
JDK-8320525	21	G1: G1UpdateRemSetTrackingBeforeRebuild::distribute _marked_bytes accesses partially unloaded klass	PSU
JDK-8320570	17, 21	NegativeArraySizeException decoding >1G UTF8 bytes with non-ascii characters	PSU
JDK-8320681	17, 21	[macos] Test tools/jpackage/macosx/MacAppStoreJlinkOptionsTest.java timed out on macOS	PSU
JDK-8320692	21, 22	Null icon returned for .exe without custom icon	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8320707	21, 22	Virtual thread test updates	PSU
JDK-8320712	17, 21	Rewrite BadFactoryTest in pure Java	PSU
JDK-8320714	21	java/util/Locale/LocaleProvidersRun.java and java/util/ResourceBundle/modules/visibility/VisibilityTest.java timeout after passing	PSU
JDK-8320715	21	Improve the tests of test/hotspot/jtreg/compiler/intrinsics/float16	PSU
JDK-8320890	22	[AIX] Find a better way to mimic dl handle equality	PSU
JDK-8320924	21	Improve heap dump performance by optimizing archived object checks	PSU
JDK-8320943	11, 17	Files/probeContentType/Basic.java fails on latest Windows 11 - content type mismatch	PSU
JDK-8321075	21, 22	RISC-V: UseSystemMemoryBarrier lacking proper OS support	PSU
JDK-8321107	17, 21	Add more test cases for JDK-8319372	PSU
JDK-8321151	22	JDK-8294427 breaks Windows L&F on all older Windows versions	PSU
JDK-8321163	21	[test] OutputAnalyzer.getExitValue() unnecessarily logs even when process has already completed	PSU
JDK-8321182	21	SourceExample.SOURCE_14 comment should refer to 'switch expressions' instead of 'text blocks'	PSU
JDK-8321270	21	Virtual Thread.yield consumes parking permit	PSU
JDK-8321276	21	runtime/cds/appcds/dynamicArchive/DynamicSharedSymbols.java failed with "'17 2: jdk/test/lib/apps ' missing from stdout/stderr"	PSU
JDK-8321408	22	Add Certainly roots R1 and E1	PSU
JDK-8321480	22	ISO 4217 Amendment 176 Update	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8321489	11, 17, 21, 22	Update LCMS to 2.16	PSU
JDK-8321713	21	Harmonize executeTestJvm with create[Limited]TestJavaProcessBuilder	PSU
JDK-8321718	21	ProcessTools.executeProcess calls waitFor before logging	PSU
JDK-8321812	21	Update GC tests to use execute[Limited]TestJava	PSU
JDK-8321815	21, 22	Shenandoah: gc state should be synchronized to java threads only once per safepoint	PSU
JDK-8321925	11, 17, 21	sun/security/mscapi/KeytoolChangeAlias.java fails with "Alias <246810> does not exist"	PSU
JDK-8321972	22	test runtime/Unsafe/InternalErrorTest.java timeout on linux-riscv64 platform	PSU
JDK-8322078	22	ZipSourceCache.testKeySourceMapping() test fails with The process cannot access the file because it is being used by another process	PSU
JDK-8322098	22	os::Linux::print_system_memory_info enhance the THP output with /sys/kernel/mm/transparent_hugepage/hpage_pmd_size	PSU
JDK-8322159	22	ThisEscapeAnalyzer crashes for erroneous code	PSU
JDK-8322163	22	runtime/Unsafe/InternalErrorTest.java fails on Alpine after JDK-8320886	PSU
JDK-8322239	11, 17, 21	[macos] a11y : java.lang.NullPointerException is thrown when focus is moved on the JTabbedPane	PSU
JDK-8322417	22	Console read line with zero out should zero out when throwing exception	PSU
JDK-8322477	21	order of subclasses in the permits clause can differ between compilations	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8322484	22	22-b26 Regression in J2dBench-bimg_misc-G1 (and more) on Windows-x64 and macOS-x64	PSU
JDK-8322503	17, 21, 22	Shenandoah: Clarify gc state usage	PSU
JDK-8322511	11	[11u] JfrCheckpointThreadClosure::do_thread crashes when fetching thread_id	PSU
JDK-8322725	8, 11, 17, 21, 22	(tz) Update Timezone Data to 2023d	PSU
JDK-8322726	22	C2: Unloaded signature class kills argument value	PSU
JDK-8322772	22	Clean up code after JDK-8322417	PSU
JDK-8322783	11, 22	prioritize /etc/os-release over /etc/SuSE-release in hs_err/info output	PSU
JDK-8322790	22	RISC-V: Tune costs for shuffles with no conversion	PSU
JDK-8322818	21	Thread::getStackTrace can fail with InternalError if virtual thread is timed-parked when pinned	PSU
JDK-8322846	21	Running with -Djdk.tracePinnedThreads set can hang	PSU
JDK-8322858	17, 21	compiler/c2/aarch64/TestFarJump.java fails on AArch64 due to unexpected PrintAssembly output	PSU
JDK-8322920	17, 21	Some ProcessTools.execute* functions are declared to throw Throwable	PSU
JDK-8322943	22	runtime/CompressedOops/CompressedClassPointers.java fails on AIX	PSU
JDK-8322945	22	Problemlist runtime/CompressedOops/CompressedClassPointers.java on AIX	PSU
JDK-8322962	21, 22	Upcall stub might go undetected when freezing frames	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8323002	21	test/jdk/java/lang/Thread/virtual/stress/GetStackTraceALotWhenPinned.java times out on macosx-x64	PSU
JDK-8323021	22	Shenandoah: Encountered reference count always attributed to first worker thread	PSU
JDK-8323065	22	Unnecessary CodeBlob lookup in CompiledIC::internal_set_ic_destination	PSU
JDK-8323086	22	Shenandoah: Heap could be corrupted by oom during evacuation	PSU
JDK-8323154	22	C2: assert(cmp != nullptr && cmp->Opcode() == Op_Cmp(bt)) failed: no exit test	PSU
JDK-8323170	21, 22	j2dbench is using outdated javac source/target to be able to build by itself	PSU
JDK-8323210	17, 21, 22	Update the usage of cmsFLAGS_COPY_ALPHA	PSU
JDK-8323276	21	StressDirListings.java fails on AIX	PSU
JDK-8323296	21	java/lang/Thread/virtual/stress/GetStackTraceALotWhenPinned.java#id1 timed out	PSU
JDK-8323331	22	fix typo hpage_pdm_size	PSU
JDK-8323428	22	Shenandoah: Unused memory in regions compacted during a full GC should be mangled	PSU
JDK-8323515	22	Create test alias "all" for all test roots	PSU
JDK-8323519	17, 21, 22	Add applications/ctw/modules to Hotspot tiered testing	PSU
JDK-8323552	22	AbstractMemorySegmentImpl#mismatch returns -1 when comparing distinct areas of the same instance of MemorySegment	PSU
JDK-8323595	21	is_aligned(p, alignof(OopT))) assertion fails in Jetty without compressed OOPs	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8323635	21	Test gc/g1/TestHumongousAllocConcurrentStart.java fails with -XX:TieredStopAtLevel=3	PSU
JDK-8323657	22	Compilation of snippet results in VerifyError at runtime with -release 9 (and above)	PSU
JDK-8323664	22	java/awt/font/JNICheck/FreeTypeScalerJNICheck. java still fails with JNI warning on some Windows configurations	PSU
JDK-8323670	22	A few client tests intermittently throw ConcurrentModificationException	PSU
JDK-8323685	21, 22	PrintSystemDictionaryAtExit has mutex rank assert	PSU
JDK-8323717	11, 17	Introduce test keyword for tests that need external dependencies	PSU
JDK-8323782	22	Race: Thread::interrupt vs. AbstractInterruptibleChannel.begin	PSU
JDK-8323801	22	<s> tag doesn't strikethrough the text	PSU
JDK-8323964	22	runtime/Thread/ThreadCountLimit.java fails intermittently on AIX	PSU
JDK-8323994	11, 17, 21, 22	gtest runner repeats test name for every single gtest assertion	PSU
JDK-8324041	22	ModuleOption.java failed with update release versioning scheme	PSU
JDK-8324050	17, 22	Issue store-store barrier after re-materializing objects during deoptimization	PSU
JDK-8324121	21, 22	SIGFPE in PhaseDealLoop::extract_long_range_checks	PSU
JDK-8324123	21	aarch64: fix prfm literal encoding in assembler	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8324236	21	compiler/ciReplay/TestInliningProtectionDomain.java failed with RuntimeException: should only dump inline information for ... expected true, was false	PSU
JDK-8324238	11, 17, 21	[macOS] java/awt/Frame/ShapeNotSetSometimes/ShapeNotSetSometimes.java fails with the shape has not been applied msg	PSU
JDK-8324243	17, 21, 22	Compilation failures in java.desktop module with gcc 14	PSU
JDK-8324280	22	RISC-V: Incorrect implementation in VM_Version::parse_satp_mode	PSU
JDK-8324347	22	Enable "maybe-uninitialized" warning for FreeType 2.13.1	PSU
JDK-8324577	17, 21	[REDO] - [IMPROVE] OPEN_MAX is no longer the max limit on macOS >= 10.6 for RLIMIT_NOFILE	PSU
JDK-8324598	11, 17, 22	use mem_unit when working with sysinfo memory and swap related information	PSU
JDK-8324632	11, 17, 21, 22	Update Zlib Data Compression Library to Version 1.3.1	PSU
JDK-8324637	22	[aix] Implement support for reporting swap space in jdk.management	PSU
JDK-8324646	21, 22	Avoid Class.forName in SecureRandom constructor	PSU
JDK-8324647	22	Invalid test group of lib-test after JDK-8323515	PSU
JDK-8324648	21, 22	Avoid NoSuchMethodError when instantiating NativePRNG	PSU
JDK-8324668	17, 21	JDWP process management needs more efficient file descriptor handling	PSU

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JDK-8324733	11, 17, 21, 22	[macos14] Problem list tests which fail due to macOS bug described in JDK-8322653	PSU
JDK-8324753	22	[AIX] adjust os_posix after JDK-8318696	PSU
JDK-8324817	21	Parallel GC does not pre-touch all heap pages when AlwaysPreTouch enabled and large page disabled	PSU
JDK-8324824	17, 21	AArch64: Detect Ampere-1B core and update default options for Ampere CPUs	PSU
JDK-8324874	22	AArch64: crypto pmull based CRC32/CRC32C intrinsics clobber V8-V15 registers	PSU
JDK-8324933	21, 22	ConcurrentHashMap::statistics_calculate synchronization is expensive	PSU
JDK-8324998	21	Add test cases for String.regionMatches comparing Turkic dotted/dotless I with uppercase latin I	PSU
JDK-8325024	21	java/security/cert/CertPathValidator/OCSP/OCSP Timeout.java incorrect comment information	PSU
JDK-8325028	21, 22	(ch) Pipe channels should lazily set socket to non-blocking mode on first use by virtual thread	PSU
JDK-8325074	22	ZGC fails assert(index == 0 is_power_of_2(index)) failed: Incorrect load shift: 11	PSU
JDK-8325095	21, 22	C2: bailout message broken: ResourceArea allocated string used after free	PSU
JDK-8325096	8	Test java/security/cert/CertPathBuilder/akiExt/AKISerialNumber.java is failing	PSU

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JDK-8325137	11, 17, 21	com/sun/management/ThreadMXBean/ThreadCpuTimeArray.java can fail in Xcomp with out of expected range	PSU
JDK-8325150	8, 11, 17, 21, 22	(tz) Update Timezone Data to 2024a	PSU
JDK-8325179	22	Race in BasicDirectoryModel.validateFileCache	PSU
JDK-8325203	17, 21, 22	System.exit(0) kills the launched 3rd party application	PSU
JDK-8325254	17	CKA_TOKEN private and secret keys are not necessarily sensitive	PSU
JDK-8325255	21, 22	jdk.internal.util.ReferencedKeySet::add using wrong test	PSU
JDK-8325313	22	Header format error in TestIntrinsicBailOut after JDK-8317299	PSU
JDK-8325326	11, 17, 21, 22	[PPC64] Don't relocate in case of allocation failure	PSU
JDK-8325372	17, 21	Shenandoah: SIGSEGV crash in unnecessary_acquire due to LoadStore split through phi	PSU
JDK-8325432	17, 21, 22	enhance assert message "relocation addr must be in this section"	PSU
JDK-8325437	21	Safepoint polling in monitor deflation can cause massive logs	PSU
JDK-8325470	22	[AIX] use fclose after fopen in read_psinfo	PSU
JDK-8325496	17, 22	Make TrimNativeHeapInterval a product switch	PSU
JDK-8325567	21, 22	jspawnhelper without args fails with segfault	PSU
JDK-8325579	11, 17, 21, 22	Inconsistent behavior in com.sun.jndi.ldap.Connection::createSocket	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8325587	22	Shenandoah: ShenandoahLock should allow blocking in VM	PSU
JDK-8325590	22	Regression in round-tripping UTF-16 strings after JDK-8311906	PSU
JDK-8325613	21, 22	CTW: Stale method cleanup requires GC after Sweeper removal	PSU
JDK-8325621	21, 22	Improve jspawnhelper version checks	PSU
JDK-8325672	22	C2: allocate PhaseIdealLoop::_loop_or_ctrl from C2::comp_arena()	PSU
JDK-8325730	22	StringBuilder.toString allocation for the empty String	PSU
JDK-8325743	21, 22	test/jdk/java/nio/channels/unixdomain/SocketOptions.java enhance user name output in error case	PSU
JDK-8325763	22	Revert properties: vm.opt.x.*	PSU
JDK-8325862	17, 21, 22	set -XX:+ErrorFileToStderr when executing java in containers for some container related jtreg tests	PSU
JDK-8325876	17, 22	crashes in docker container tests on Linuxppc64le Power8 machines	PSU
JDK-8325908	21	Finish removal of IntlTest and CollatorTest	PSU
JDK-8325927	8	[8u] Backport of JDK-8170552 missed part of the test	PSU
JDK-8326000	22	Remove obsolete comments for class sun.security.ssl.SunJSSE	PSU
JDK-8326006	11, 17, 21, 22	Allow TEST_VM_FLAGLESS to set flagless mode	PSU
JDK-8326101	11, 17, 21, 22	[PPC64] Need to bailout cleanly if creation of stubs fails when code cache is out of space	PSU
JDK-8326106	22	Write and clear stack trace table outside of safepoint	PSU

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JDK-8326140	17, 21, 22	src/jdk.accessibility/windows/native/libjavaaccessbridge/AccessBridgeJavaEntryPoints.cpp ReleaseStringChars might be missing in early returns	PSU
JDK-8326201	11, 17, 21, 22	[S390] Need to bailout cleanly if creation of stubs fails when code cache is out of space	PSU
JDK-8326351	11, 17, 21, 22	Update the Zlib version in open/src/java.base/share/legal/zlib.md to 1.3.1	PSU
JDK-8326360	22	Update the Zlib version in open/src/java.base/share/legal/zlib.md to 1.3	PSU
JDK-8326446	21, 22	The User and System of jdk.CPULoad on Apple M1 are inaccurate	PSU
JDK-8326496	21, 22	[test] checkHsErrFileContent support printing hserr in error case	PSU
JDK-8326521	11, 17, 21, 22	JFR: CompilerPhase event test fails on windows 32 bit	PSU
JDK-8326529	11, 17, 21, 22	JFR: Test for CompilerCompile events fails due to time out	PSU
JDK-8326591	11, 17, 21	New test JmodExcludedFiles.java fails on Windows when --with-external-symbols-in -bundles=public is used	PSU
JDK-8326638	11, 17, 21, 22	Crash in PhaseldealLoop::remix_address_expressions due to unexpected Region instead of Loop	PSU
JDK-8326643	11, 17, 21, 22	JDK server does not send a dummy change_cipher_spec record after HelloRetryRequest message	PSU
JDK-8326661	11, 17, 21	sun/java2d/cmm/ColorConvertOp/ColConvTest.java assumes profiles were generated by LCMS	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8326718	21	Test java/util/Formatter/Padding.java should timeout on large inputs before fix in JDK-8299677	PSU
JDK-8326824	21	Test: remove redundant test in compiler/vectorapi/reshape/utils/TestCastMethods.java	PSU
JDK-8326936	17, 21, 22	RISC-V: Shenandoah GC crashes due to incorrect atomic memory operations	PSU
JDK-8326938	11	[11u] JDK-8214908 broke two CTW tests	PSU
JDK-8326942	17	[17u] Backout "8325254: CKA_TOKEN private and secret keys are not necessarily sensitive"	PSU
JDK-8326948	21	Force English locale for timeout formatting	PSU
JDK-8326974	21, 22	ODR violation in macroAssembler_aarch64.cpp	PSU
JDK-8327036	21	[macosx-aarch64] SIGBUS in MarkActivationClosure::do_code_blob reached from Unsafe_CopySwapMemory0	PSU
JDK-8327040	22	Problemlist ActionListenerCalledTwiceTest.java test failing in macos14	PSU
JDK-8327059	17, 21, 22	os::Linux::print_proc_sys_info add swappiness information	PSU
JDK-8327096	21	(fc) java/nio/channels/FileChannel/Size.java fails on partition incapable of creating large files	PSU
JDK-8327136	11, 17, 21	javax/management/remote/mandatory/notif/NotifReconnectDeadlockTest.java fails on libgraal	PSU
JDK-8327137	22	Add test for ConcurrentModificationException in BasicDirectoryModel	PSU
JDK-8327180	21	Failed: java/io/ObjectStreamClass/ObjectStreamClassCaching.java#G1	PSU

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JDK-8327261	21	Parsing test for Double/Float succeeds w/o testing all bad cases	PSU
JDK-8327391	22	Add SipHash attribution file	PSU
JDK-8327468	21, 22	Do not restart close if errno is EINTR [macOS/linux]	PSU
JDK-8327474	21	Review use of java.io.tmpdir in jdk tests	PSU
JDK-8327486	21	java/util/Properties/PropertiesStoreTest.java fails "Text 'xxx' could not be parsed at index 20" after 8174269	PSU
JDK-8327501	22	Common ForkJoinPool prevents class unloading in some cases	PSU
JDK-8327631	17, 21, 22	Update IANA Language Subtag Registry to Version 2024-03-07	PSU
JDK-8327799	21	JFR view: the "Park Until" field of jdk.ThreadPark is invalid if the parking method is not absolute	PSU
JDK-8327971	21	Multiple ASAN errors reported for metaspace	PSU
JDK-8327988	21	When running ASAN, disable dangerous NMT test	PSU
JDK-8327989	17, 21	java/net/httpclient/ManyRequest.java should not use "localhost" in URIs	PSU
JDK-8327990	22	[macosx-aarch64] Various tests fail with -XX:+AssertWXAtThreadSync	PSU
JDK-8327998	17, 21	Enable java/lang/ProcessBuilder/JspawnhelperProtocol.java on Mac	PSU
JDK-8328037	21	Test java/util/Formatter/Padding.java has unnecessary high heap requirement after JDK-8326718	PSU
JDK-8328066	17, 21, 22	WhiteBoxResizeTest failure on linux-x86: Could not reserve enough space for 2097152KB object heap	PSU

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JDK-8328075	22	Shenandoah: Avoid forwarding when objects don't move in full-GC	PSU
JDK-8328165	17, 21, 22	improve assert(idx < _maxlrg) failed: oob	PSU
JDK-8328166	17, 21, 22	Epsilon: 'EpsilonHeap::allocate_work' misuses the parameter 'size' as size in bytes	PSU
JDK-8328168	17, 21, 22	Epsilon: Premature OOM when allocating object larger than uncommitted heap size	PSU
JDK-8328194	11, 17, 21	Add a test to check default rendering engine	PSU
JDK-8328316	22	Finisher cannot emit if stream is sequential and integrator returned false	PSU
JDK-8328366	22	Thread.setContextClassLoader from thread in FJP commonPool task no longer works after JDK-8327501	PSU
JDK-8328524	11, 17, 21, 22	[x86] StringRepeat.java failure on linux-x86: Could not reserve enough space for 2097152KB object heap	PSU
JDK-8328540	11, 17, 21	test javax/swing/JSplitPane/4885629/bug4885629.java fails on windows hidpi	PSU
JDK-8328555	21	hidpi problems for test java/awt/Dialog/DialogAnotherThread/JaWSTest.java	PSU
JDK-8328589	21, 22	unify os::breakpoint among posix platforms	PSU
JDK-8328592	21	hprof tests fail with -XX:-CompactStrings	PSU
JDK-8328604	21, 22	remove on_aix() function	PSU
JDK-8328638	17, 21, 22	Fallback option for POST-only OCSP requests	PSU
JDK-8328702	21, 22	C2: Crash during parsing because sub type check is not folded	PSU

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JDK-8328703	21, 22	Illegal accesses in Java_jdk_internal_org_jline_terminal_impl_jna_linux_CLibraryImpl_ioctl0	PSU
JDK-8328709	21, 22	AIX os::get_summary_cpu_info support Power 10	PSU
JDK-8328744	21, 22	Parallel: Parallel GC throws OOM before heap is fully expanded	PSU
JDK-8328776	21, 22	[AIX] remove checked_vmgetinfo, use vmgetinfo directly	PSU
JDK-8328809	8	[8u] Problem list some CA tests	PSU
JDK-8328812	11, 17, 21, 22	Update and move siphash license	PSU
JDK-8328822	21, 22	C2: "negative trip count?" assert failure in profile predicate code	PSU
JDK-8328825	8, 11, 17, 21, 22	Google CAInterop test failures	PSU
JDK-8328938	21	C2 SuperWord: disable vectorization for large stride and scale	PSU
JDK-8328953	22	JEditorPane.read throws ChangedCharSetException	PSU
JDK-8328957	21	Update PKCS11Test.java to not use hardcoded path	PSU
JDK-8328988	17, 21, 22	[macos14] Problem list LightweightEventTest.java which fails due to macOS bug described in JDK-8322653	PSU
JDK-8328997	17, 21, 22	Remove unnecessary template parameter lists in GrowableArray	PSU
JDK-8329013	17, 21, 22	StackOverflowError when starting Apache Tomcat with signed jar	PSU

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JDK-8329109	21, 22	Threads::print_on() tries to print CPU time for terminated GC threads	PSU
JDK-8329134	22	Reconsider TLAB zapping	PSU
JDK-8329163	21, 22	C2: possible overflow in PhasdealLoop::extract_long_range_checks()	PSU
JDK-8329213	17, 21, 22	Better validation for com.sun.security.ocsp.useget option	PSU
JDK-8329223	17, 21, 22	Parallel: Parallel GC resizes heap even if -Xms = -Xmx	PSU
JDK-8329510	22	Update ProblemList for JFileChooser/8194044/FileSystemRootTest.java	PSU
JDK-8329528	22	G1 does not update TAMS correctly when dropping retained regions during Concurrent Start pause	PSU
JDK-8329544	8	[8u] sun/security/krb5/auto/ReplayCacheTestProc.java cannot find the testlibrary	PSU
JDK-8329545	21, 22	[s390x] Fix garbage value being passed in Argument Register	PSU
JDK-8329570	17, 21, 22	G1: Excessive is_obj_dead_cond calls in verification	PSU
JDK-8329605	21, 22	hs_errfile generic events - move memory protections and nmethod flushes to separate sections	PSU
JDK-8329656	22	assertion failed in MAP_ARCHIVE_MMAP_FAILURE path: Invalid immediate -5 0	PSU
JDK-8329663	21, 22	hs_err file event log entry for thread adding/removing should print current thread	PSU
JDK-8329823	17, 21, 22	RISC-V: Need to sync CPU features with related JVM flags	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8329840	21, 22	Fix ZPhysicalMemorySegment::_end type	PSU
JDK-8329850	21, 22	[AIX] Allow loading of different members of same shared library archive	PSU
JDK-8329862	21, 22	libjli GetApplicationHome cleanups and enhance jli tracing	PSU
JDK-8329958	22	Windows x86 build fails: downcallLinker.cpp(36) redefinition	PSU
JDK-8329961	21, 22	Buffer overflow in os::Linux::kernel_version	PSU
JDK-8330011	21, 22	[s390x] update block-comments to make code consistent	PSU
JDK-8330027	22	Identity hashes of archived objects must be based on a reproducible random seed	PSU
JDK-8330094	17, 21, 22	RISC-V: Save and restore FRM in the call stub	PSU
JDK-8330156	17, 21, 22	RISC-V: Range check auipc + signed 12 imm instruction	PSU
JDK-8330242	17, 21, 22	RISC-V: Simplify and remove CORRECT_COMPILER_ATOMIC_SUPPORT in atomic_linux_riscv.hpp	PSU
JDK-8330275	21, 22	Crash in XMark::follow_array	PSU
JDK-8330464	21, 22	hserr generic events - add entry for the before_exit calls	PSU
JDK-8330523	17, 21, 22	Reduce runtime and improve efficiency of KeepAliveTest	PSU
JDK-8330524	21, 22	Linux ppc64le compile warning with clang in os_linux_ppc.cpp	PSU
JDK-8330576	22	ZYoungCompactionLimit should have range check	PSU
JDK-8330615	21, 22	avoid signed integer overflows in zip_util.c readCen / hashN	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8330748	22	ByteArrayOutputStream.writeTo(OutputStream) pins carrier	PSU
JDK-8330806	8, 11	test/hotspot/jtreg/compiler/c1/TestLargeMonitorOffset.java fails on ARM32	PSU
JDK-8330814	22	Cleanups for KeepAliveCache tests	PSU
JDK-8330815	17, 21, 22	Use pattern matching for instanceof in KeepAliveCache	PSU
JDK-8331031	21, 22	unify os::dont_yield and os::naked_yield across Posix platforms	PSU
JDK-8331167	21, 22	UBSan enabled build fails in adlc on macOS	PSU
JDK-8331298	21, 22	avoid alignment checks in UBSAN enabled build	PSU
JDK-8331344	22	No compiler replay file with CompilerCommand MemLimit	PSU
JDK-8331466	21, 22	Problemlist serviceability/dcmd/gc/RunFinalizationTest.java on generic-all	PSU
JDK-8331714	22	Make OopMapCache installation lock-free	PSU
JDK-8331746	22	Create a test to verify that the cmm id is not ignored	PSU
JDK-8331750	11	[11u] JDK-8259530 is not backported correctly to 11u	PSU
JDK-8331790	11	[11u] Remove problemlist entries after backport of JDK-8228649	PSU
JDK-8331791	8	[8u] AIX build break from JDK-8320005 backport	PSU
JDK-8331885	22	C2: meet between unloaded and speculative types is not symmetric	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8331894	22	[jdk22] compiler/print/CompileCommandMemLimit.java fails after backporting JDK-8325095	PSU
JDK-8331942	17, 21, 22	On Linux aarch64, CDS archives should be using 64K alignment by default	PSU
JDK-8331980	8	[8u] Problem list CAInterop.java#certignarootca test	PSU
JDK-8332253	21, 22	Linux arm32 build fails after 8292591	PSU
JDK-8332490	22	JMH org.openjdk.bench.java.util.zip.InflaterInputStream s.inflaterInputStreamRead OOM	PSU
JDK-8333093	22	Incorrect comment in zAddress_aarch64.cpp	PSU
JDK-8334441	11, 17, 21	Mark tests in jdk_security_infra group as manual	PSU
JDK-8334711	11	[TEST_BUG] Compilation failed of MimeFormatsTest/MimeFormatsTest.java	PSU
JDK-8335552	8	[8u] JDK-8303466 backport to 8u requires 3 ::Identity signature fixes	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-8329705	8, 11, 17, 21, 22	Add missing Application thread checks to platform specific a11y methods	CPU,PSU
JDK-8196617	8	FX print tests fail with NPE in some environments	PSU
JDK-8301312	11	Create implementation of NSAccessibilityButton protocol	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8306329	8	Update ICU4C to 73.1	PSU
JDK-8322251	8, 11, 17, 21, 22	[Linux] JavaFX is not displaying CJK on Ubuntu 23.10 and later	PSU
JDK-8324326	8, 11, 17, 21, 22	Update ICU4C to 74.2	PSU
JDK-8328749	8, 11, 17, 21, 22	Remove unused imports in javafx.web	PSU
JDK-8328752	8, 11, 17, 21, 22	Fix missing @Overrides in javafx.web	PSU
JDK-8329011	8, 11, 17, 21, 22	Update SQLite to 3.45.3	PSU
JDK-8330462	11, 17, 21, 22	StringIndexOutOfBoundsException when typing anything into TextField	PSU
JDK-8331748	8, 11, 17, 21, 22	Update libxml2 to 2.12.6	PSU
JDK-8332328	11, 17, 21, 22	[GHA] GitHub Actions build fails on Linux: unable to find gcc-13	PSU
JDK-8332539	8, 11, 17, 21, 22	Update libxml2 to 2.12.7	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-58709	7	upgrade to Visual Studio 2017 for zulu7	CPU,PSU
ZULU-61018	6, 7	[7u] align ostream.cpp with 8u after JDK-8049253	CPU,PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-61038	6, 7	[7u] hotspot build fails due to narrowing conversion warning in ad_x86_64.cpp	CPU,PSU
ZULU-61549	6	upgrade to Visual Studio 2017 for zulu6	CPU,PSU
ZULU-61560	7	-XX:+UnlockDiagnosticVMOptions -XX:+PrintInterpreter -version unexpected behavior on Zulu 7 with upgrade to VS2017	CPU,PSU
ZULU-61562	7	UnsatisfiedLinkError on awt.dll, Zulu 7 with upgrade to VS2017	CPU,PSU
ZULU-61786	6	[6u] remove <i>declspec(dllimport)</i> specifier for <i>initenv</i> to align with 7u	CPU,PSU
ZULU-62116	6	com/sun/jdi test failures after ZULU-58709	CPU,PSU
ZULU-62139	6, 7	java/nio/channels test failures after ZULU-58709	CPU,PSU
ZULU-63122	11, 17, 21	Provide option for zipfs to ignore invalid extra field	CPU,PSU
ZULU-63267	11, 17, 21	Adjust jdk.zipfs permissions after ZULU-63122	CPU,PSU
ZULU-56476		Unprivileged restore by CRIU may result in segfault	PSU
ZULU-58705	8	Bump minimum target version for zulu8 fx to centos:7	PSU
ZULU-59230	11	fastdebug build fails on solaris	PSU
ZULU-59418	8	QNX7.1 JTREG java/nio/channels/Asynchronous* java.lang.InternalError: ionotify failed: 11	PSU
ZULU-59870	17, 21, 22	Disable rseq in libc on checkpoint	PSU
ZULU-60195		CRIU fails restore on glibc < 2.25	PSU
ZULU-60352	17, 21, 22	Use crac-cru 1.6.1	PSU
ZULU-60367		Cannot uninstall zulu-fx-8 on opensuse & unclean uninstall on others RPM-based	PSU
ZULU-60463	17, 21, 22	CRaCResetStartTime breaks cgroups caching	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-60477		add copyright file to deb packages	PSU
ZULU-60480		Linux CRaC on MacOS: Docker	PSU
ZULU-60484	17, 21, 22	Assertion error in os::cleanup_memory()	PSU
ZULU-60491	17, 21, 22	Closing CompileLog leads to SIGSEGV	PSU
ZULU-60493	17, 21, 22	Checkpoint fails with CheckUnhandledOops	PSU
ZULU-60674	8, 11	Change to Xcode 12.3 for building on macOS x86_64	PSU
ZULU-60675	17, 21, 22	JVM log filename is not recomputed on restore	PSU
ZULU-61037	17, 21, 22	VM options for CRaC compression	PSU
ZULU-61039	17, 21, 22	CRaC: Restore errors are not visible	PSU
ZULU-61942	11	build on solaris fails after JDK-8210988	PSU
ZULU-61943	8	Resource flags are not set for j2gss.dll and sspi_bridge.dll	PSU
ZULU-62231	17, 21	Compilation error with gcc-14	PSU
ZULU-62531	17, 21, 22	CRaC VM options are not consistent	PSU
ZULU-62660	8	QNX71 oj-reg io-nio java/nio/channels/AsynchronousSocketChannel/Basic.java	PSU
ZULU-63172		zulu-fx deb should not depend on transitional packages	PSU
ZULU-63174	21, 22	sun.nio.ch.Pollers does not handle checkpoint	PSU
ZULU-63262		Restore races PIDs in non-containerized envs after ZULU-60480	PSU
ZULU-63330	17, 21, 22	JVM initialization change after ZULU-62531	PSU
ZULU-63336	11	solaris: libawt fails to use isinf() after JDK-8210988	PSU
ZULU-63490	17, 21, 22	Fix deprecation notice for CRaC options	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-63526		Cannot install zulu-fx-{8,11,17,21} on Debian 10, Ubuntu 18.04, 20.04 after ZULU-63172	PSU
ZULU-63755	22	CRaC: CPUFeatures: error on centos7 build with pre-set env GLIBC_TUNABLES and -XX:CPUFeatures=generic	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-38524	8, 11, 17, 21, 22	[FX][WEBKIT] unit test javafx.scene.web.MiscellaneousTest.testFontFace fail on win32	PSU
ZULU-38525	8, 11, 17, 21, 22	[jfx][webkit] test avafx.scene.web.FileReaderTest hang on win32	PSU
ZULU-55581	8, 11	win32: glib build is broken after JDK-8318386	PSU
ZULU-56532	8, 11, 17, 21, 22	tests for testRT18097 fail with bundled jfx	PSU
ZULU-57795	11	control tests are broken after JDK-8311127	PSU
ZULU-58163	17, 21, 22	VersionInfoTest fails with bundled jfx	PSU
ZULU-58936	8	linux: glib build is broken after JDK-8318386	PSU
ZULU-60353	8	tests in test.javafx.print package fail on wi2019 for zulu8	PSU
ZULU-60472	8, 11	Test window doesn't receive focus	PSU

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