



Azul Zulu builds of OpenJDK

October 2023 Quarterly Update

Release Notes

Revision 1.3

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Revision History

Revision	Date	Description
0.1	October 17, 2023	Initial version of the document.
1.0	October 17, 2023	Added information about the CVEs fixed in this release + CRaC CPU Features.
1.1	October 26, 2023	What's New: extra info regarding security related issues.
1.2	November 15, 2023	Added 21 CPU version info.
1.3	November 23, 2023	Added CRaC for Alpine Linux.

Release Details

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

The following table lists detailed information on the Azul Zulu versions released with the current update.

Azul Zulu Version (*)	Update Type (**)	JDK Version	Based on		JavaFX Version
			Azul Zulu Version	JDK Version	
21.29.12 (SA)	CPU	21.0.0.0.101+1	21.28.86	21.0.0+35	21.0.0.0.101+100
21.30.15 (CA) 21.30.16 (SA)	PSU	21.0.1+11	21.28	21.0.0+35	21.0.1+100
17.45.16 (SA)	CPU	17.0.8.1.101+1	17.44	17.0.8+7	20.0.2.0.101+100
17.46.19 (CA) 17.46.20 (SA)	PSU	17.0.9+8 (***)	17.45	17.0.8.1.101+1	21.0.1+101
11.67.16 (SA)	CPU	11.0.20.1.101+1	11.66	11.0.20.1+1	19.0.4.0.101+100
11.68.17 (CA) 11.68.18 (SA)	PSU	11.0.21+9	11.67	11.0.20.1.101+1	19.0.5+100

8.73.0.12 (SA)	CPU	8u391-b01	8.72	8u382-b05	8u391-b01
8.74.0.17 (CA) 8.74.0.18 (SA)	PSU	8u392-b08	8.73	8u391-b01	8u392-b02
7.65.0.14 (SA)	CPU	7u401-b01	7.63	7u391-b02	N/A
6.59.0.14 (SA)	CPU	6b159	6.57	6b157	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.

(**): `jdk-17.0.9+8` and `jdk-17.0.9+9` have the same exact code, with the only difference being the build number tag.

What's New

Changes in Installation Paths and Package Names

Similarly to the 21 GA release in September, the following package names and installation paths changed for the RPM and DEB installers of all the other versions of Zulu.

- `<ZV>`: Zulu Version, for example, `11.68.18`.
- `<OV>`: OpenJDK Version, for example, `11.0.21`.
- `<MV>`: Major Version, for example, `11`.

Bundle	Old package name	New package name	Old install folder [1]	New install folder [1]
RPM				
zulu<ZV>-sa-fx-jdk<OV>	zulu-fx-<MV>	zulu-fx-<MV>	java-<MV>-zulu-openjdk-jdk	java-<MV>-zulu-openjdk-jdk-fx
zulu<ZV>-sa-fx-jre<OV>	zre-fx-<MV>	zre-fx-<MV>	java-<MV>-zulu-openjdk-jre	java-<MV>-zulu-openjdk-jre-fx
zulu<ZV>-dbg-tools-sa-jre<OV>	zre-hl-tools-<MV>	zre-hl-tools-<MV>	java-<MV>-zulu-openjdk-jre-headless	java-<MV>-zulu-openjdk-jre-headless-tools
zulu<ZV>-sa-hl-jre<OV>	zre-<MV>	zre-hl-<MV>	java-<MV>-zulu-openjdk-jre-headless	java-<MV>-zulu-openjdk-jre-headless
DEB				
zulu<ZV>-sa-hl-jre<OV>	zre-<MV>	zre-hl-<MV>	zre-<MV>-amd64	zre-hl-<MV>-amd64

1. Installation folder inside `/usr/lib/jvm/`

As an example, the changes for the DEB installation paths and package names, results in:

- Bundle: `zulu11.68.18-sa-hl-jre11.0.21`
- Old package name: `zre-11`
- New package name: `zre-hl-11`
- Old installation folder inside `/usr/lib/jvm/`: `zre-11-amd64`
- New installation folder inside `/usr/lib/jvm/`: `zre-hl-11-amd64`

NOTE

RPM and DEB upgrades and downgrades of `zre-hl-<MV>` packages between any modified version (e.g. `zulu11.67`) and any old version (`zulu11.66` or earlier) will not work properly. You will need to uninstall the previous version and then install the new one if you want to upgrade or downgrade.

Changes Related to CORBA

Fix for Versions 6, 7, and 8

CORBA (Common Object Request Broker Architecture) deserialization can result in outbound network connections with data passed in. [JDK-8303384](#) has been included in version 6, 7, and 8 of Azul Zulu Builds of OpenJDK.

System Properties

The JDK's CORBA implementation now provides the option to limit serialisation in stub objects to those with the `IOR:` prefix. For ORB (Object Request Broker) constrained stub classes (`_DynArrayStub`, `_DynEnumStub`, `_DynFixedStub`, `_DynSequenceStub`, `_DynStructStub`, `_DynUnionStub`, `_DynValueStub`, `_DynAnyStub`, `_DynAnyFactoryStub`), this is enabled by default. You can disable this by setting the system property `org.omg.DynamicAny.disableIORCheck` to `true`.

The effect of the existing `com.sun.CORBA.ORBAllowDeserializeObject` property expanded to the ORB constrained stub classes.

For remote service stub classes (`_NamingContextStub`, `_BindingIteratorStub`, `_NamingContextExtStub`, `_ServantActivatorStub`, `_ServantLocatorStub`,

`_ServerManagerStub`, `_ActivatorStub`, `_RepositoryStub`, `_InitialNameServiceStub`, `_LocatorStub`, `_ServerStub`), it is disabled by default. You can enable this by setting the system property `org.omg.CORBA.IDL.Stubs.enableIORCheck` to `true`.

Added a Default Native GSS-API Library on Windows

With [JDK-6722928](#) (for version 7, 8, and 11), a native GSS-API library named `sspi_bridge.dll` has been added to the JDK on the Windows platform. As with native GSS-API library provision on other operating systems, it will only be loaded when the `sun.security.jgss.native` system property is set to `true`. You can still load a third-party native GSS-API library instead by setting the `sun.security.jgss.lib` system property to the appropriate path.

The library is client-side only, and uses the default credentials. Native GSS support automatically uses cached credentials from the underlying operating system, so the `javax.security.auth.useSubjectCredsOnly` system property should be set to `false`.

The `com.sun.security.auth.module.Krb5LoginModule` does not call native JGSS and so its use in your JAAS config should be avoided.

Deprecation of 3DES and RC4 in Kerberos

With [JDK-8139348](#) (for version 7, 8, and 11), the `des3-hmac-sha1` and `rc4-hmac` Kerberos encryption types (etypes) are now deprecated and disabled by default. To re-enable them, you can either enable all weak crypto (which also includes `des-cbc-crc` and `des-cbc-md5`) by setting `allow_weak_crypto = true` in the `krb5.conf` configuration file or explicitly list all the preferred encryption types using the `default_tkt_etypes`, `default_tgs_etypes`, or `permitted_etypes` settings.

Cloning of Arrays in Several JAAS Callback Classes

[JDK-8242330](#) (for version 8 and 11) fixes an issue where, in the JAAS classes,

`ChoiceCallback` and `ConfirmationCallback`, arrays were not cloned when passed into a constructor or returned. This allowed an external program to get access to the internal fields of these classes. The classes have been updated to return cloned arrays.

Extended CRaC Support

- Docker images with CRaC are available from [Docker Hub](#).
- You can control the target CPU to be employed, by providing the `-XX:CPUFeatures` option on checkpoint.
 - E.g., use `-XX:CPUFeatures=generic` to ensure the image can be restored on every CPU.
 - Currently, this option is only available on Linux/x64.
 - See [CPU Features](#).
- In simple cases, you can avoid application changes and replace them with command line configuration, see [File Descriptor Policies](#).
- OpenJDK Builds of Zulu with CRaC support are now also available for Alpine Linux.

IANA Time Zone Database version

This release of Azul Zulu comes with IANA Time Zone Database version 2023c.

Supported Platforms

This section provides information about the operating systems that are supported in this update 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
Windows (x86 32/64-bit)						
Windows Server 2022						 [2]
Windows Server 2019						 [2]
Windows Server 2016						 [2]
Windows Server 2012 R2						 [2]
Windows 11						 [2]
Windows 10						 [2]
Windows (ARM 64-bit)						
Windows 11	n/a	n/a	n/a	n/a		n/a
Windows 10	n/a	n/a	n/a	n/a		n/a
Linux (x86 32/64-bit)						
RHEL 9.x	n/a					 [2]
RHEL 8.x						 [2]
RHEL 7.x						 [2]
SLES 15						 [2]
SLES 12						 [2]
CentOS Stream						 [2]
Ubuntu 22.04						 [2]

Ubuntu 20.04							[2]
Ubuntu 18.04							[2]
Debian 12							[2]
Debian 11							[2]
Debian 10							[2]
Wind River 8.x	n/a			n/a	n/a	n/a	
CoreOS	n/a					n/a	
Alpine Linux 3.11 or later	n/a	n/a					
Amazon Linux 2023	n/a	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			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				n/a	
Linux with kernel 3.10.x and glibc 2.23 [3] [4]	n/a	n/a			n/a	n/a	
Linux (ARM 32-bit Hard-Float)							
Ubuntu 18.04 [5]	n/a	n/a				n/a	
Raspbian 10 Buster [5]	n/a	n/a				n/a	
Raspbian 9 Stretch [5]	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	
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
Debian 7 Wheezy [9]	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
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
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
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
QNX (ARMv7 32-bit Hard-Float ABI)						
QNX 7.0	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
Solaris 10	n/a	✓	✓	n/a	n/a	n/a
AIX (ppc64)						
AIX 7.3	n/a	n/a	✓	n/a	n/a	n/a

1. Installation folder inside /usr/lib/jvm/
2. Build of OpenJDK (with and without OpenJFX) only for 64-bit.
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 will 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 version 17 and 21 of Azul Zulu Builds of OpenJDK. For development, you can use the CRaC Java library on any platform.

Operating System	Azul Zulu Version	
	17	21
Linux (x86 64-bit)	✓	✓
Linux (ARM 64-bit)	✓	✓
Alpine Linux 3.11+ (x86 64-bit)	✓	✓
Alpine Linux 3.11+ (ARM 64-bit)	✓	✓

Fixed Issues

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

Fixed Common Vulnerabilities and Exposures

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

CVE #	Component	Protocol	Remote Exploit w/o Auth.	Base Score	Attack Vector	Attack Complex	Privileges Req'd	User Interact	Scope	Confidentiality	Integrity	Availability	Azul Zulu Versions Affected	Notes
CVE-2023-22067	CORBA	CORBA	Yes	5.3	Network	Low	None	None	Unchanged	None	Low	None	8, 7, 6	Note 1
CVE-2023-22081	JSSE	HTTPS	Yes	5.3	Network	Low	None	None	Unchanged	None	None	Low	21, 17, 11, 8, 7, 6	Note 2
CVE-2023-22025	Hotspot	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	Low	None	21, 17	Note 3
CVE-2023-30589	Oracle GraalVM for JDK: Node (Node.js)	HTTP	Yes	7.5	Network	Low	None	None	Unchanged	None	High	None	None	
CVE-2023-22091	Oracle GraalVM for JDK: Compiler	Multiple	Yes	4.8	Network	High	None	None	Unchanged	Low	Low	None	None	

Notes:

ID	Notes
1	This vulnerability can only be exploited by supplying data to APIs in the specified Component, e.g., through a web service.
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).
3	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.

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-8283441	6, 7, 8	C2: segmentation fault in <code>ciMethodBlocks::make_block_at(int)</code>	CPU,PSU
JDK-8286503	6, 7, 8, 11, 17, 21	Enhance security classes	CPU,PSU
JDK-8296581	11, 17, 21	Better system proxy support	CPU,PSU
JDK-8297856	6, 7, 8, 11, 17, 21	Improve handling of Bidi characters	CPU,PSU
JDK-8304153	8, 11, 17, 21	Enhance image stability	CPU,PSU
JDK-8307278	6, 7, 8, 11, 17, 21	Upgrade Libpng	CPU,PSU
JDK-8307286	6, 7, 8, 11, 17, 21	Upgrade FreeType	CPU,PSU
JDK-8312248	17, 21	Enhanced archival support redux	CPU,PSU
JDK-8312367	6, 7, 8, 11, 17, 21	Enhance security classes	CPU,PSU
JDK-8314520	8, 11, 17, 21	Upgrade Webkit to latest	CPU,PSU
JDK-8314649	17, 21	Enhanced archival support redux	CPU,PSU
JDK-8317040	8, 11, 17	Adapt a cleaner test for older releases	CPU,PSU
JDK-8308204	8, 11, 17	Enhanced certificate processing	PSU

OpenJDK Bug Fixes

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

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8242330	6, 7, 8, 11	Arrays should be cloned in several JAAS Callback classes	CPU,PSU
JDK-8283441	6, 7, 8	C2: segmentation fault in ciMethodBlocks::make_block_at(int)	CPU,PSU
JDK-8284910	6, 7, 8, 11, 17	Buffer clean in PasswordCallback	CPU,PSU
JDK-8286503	6, 7, 8, 11, 17, 21	Enhance security classes	CPU,PSU
JDK-8295685	6, 7, 8	Update Libpng to 1.6.38	CPU,PSU
JDK-8296581	11, 17, 21	Better system proxy support	CPU,PSU
JDK-8297856	6, 7, 8, 11, 17, 21	Improve handling of Bidi characters	CPU,PSU
JDK-8298974	11, 17	Add ftcolor.c to imported freetype sources	CPU,PSU
JDK-8303384	6, 7, 8	Improved communication in CORBA	CPU,PSU
JDK-8305815	6, 7, 8, 11, 17	Update Libpng to 1.6.39	CPU,PSU
JDK-8306881	6, 7, 8, 11, 17	Update FreeType to 2.13.0	CPU,PSU
JDK-8307278	6, 7, 8, 11, 17, 21	Upgrade Libpng	CPU,PSU
JDK-8307286	6, 7, 8, 11, 17, 21	Upgrade FreeType	CPU,PSU
JDK-8309966	6, 7, 8, 11, 17, 21	Enhanced TLS connections	CPU,PSU
JDK-8312248	17, 21	Enhanced archival support redux	CPU,PSU
JDK-8312367	6, 7, 8, 11, 17, 21	Enhance security classes	CPU,PSU
JDK-8313576	17, 21	GCC 7 reports compiler warning in bundled freetype 2.13.0	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8313765	11, 17, 21	Invalid CEN header (invalid zip64 extra data field size)	CPU,PSU
JDK-8314649	17, 21	Enhanced archival support redux	CPU,PSU
JDK-8317040	8, 11, 17	Adapt a cleaner test for older releases	CPU,PSU
JDK-8317121	17, 21	vector_masked_load instruction is moved too early after JDK-8286941	CPU,PSU
JDK-6176679	11, 17	Application freezes when copying an animated gif image to the system clipboard	PSU
JDK-6381945	17	(cal) Japanese calendar unit test system should avoid multiple static imports	PSU
JDK-6722928	8	Provide a default native GSS-API library on Windows	PSU
JDK-8023980	11	JCE doesn't provide any class to handle RSA private key in PKCS#1	PSU
JDK-8040793	17	vmTestbase/nsk/monitoring/stress/lowmem fails on calling isCollectionUsageThresholdExceeded()	PSU
JDK-8040887	8	[TESTBUG] Remove test/runtime/6925573/SortMethodsTest.java	PSU
JDK-8042726	8	[TESTBUG] TEST.groups file was not updated after runtime/6925573/SortMethodsTest.java removal	PSU
JDK-8139348	8	Deprecate 3DES and RC4 in Kerberos	PSU
JDK-8153837	17	AArch64: Handle special cases for MaxINode & MinINode	PSU
JDK-8155246	11	Throw error if default java.security file is missing	PSU
JDK-8156889	17	ListKeychainStore.sh fails in some virtualized environments	PSU
JDK-8158880	11	test/java/time/tck/java/time/format/TCKDateTimeFormatterBuilder.java fail with zh_CN locale	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8159156	8	[TESTBUG] ReserveMemory test is not useful on Aix.	PSU
JDK-8168261	11	Use server cipher suites preference by default	PSU
JDK-8171221	17	Remove -XX:+CheckMemoryInitialization	PSU
JDK-8173072	8	zipfs fails to handle incorrect info-zip "extended timestamp extra field"	PSU
JDK-8180266	17	Convert sun/security/provider/KeyStore/DKSTest.sh to Java Jtreg Test	PSU
JDK-8181383	11	com/sun/jdi/OptionTest.java fails intermittently with bind failed: Address already in use	PSU
JDK-8195589	17	T6587786.java failed after JDK-8189997	PSU
JDK-8200468	8	Port the native GSS-API bridge to Windows	PSU
JDK-8201516	11	DebugNonSafepoints generates incorrect information	PSU
JDK-8202952	8	C2: Unexpected dead nodes after matching	PSU
JDK-8205399	8	Set node color on pinned HashMap.TreeNode deletion	PSU
JDK-8209115	8	adjust libsplashscreen linux ppc64le builds for easier libpng update	PSU
JDK-8209398	11, 17	sun/security/pkcs11/KeyStore/SecretKeysBasic.sh failed with "PKCS11Exception: CKR_ATTRIBUTE_SENSITIVE"	PSU
JDK-8211343	11	nsk_jvmti_parseoptions should handle multiple suboptions	PSU
JDK-8212045	11	Add back the tests that were removed from HashesTest.java and AddExportsTest.java	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8216059	11	nsk_jvmti_parseoptions still has dependency on tilde separator	PSU
JDK-8217237	11	HttpClient does not deal well with multi-valued WWW-Authenticate challenge headers	PSU
JDK-8217395	11	Update langtools shell tests to use \${EXE_SUFFIX}	PSU
JDK-8217612	11	(CL)HSDB cannot show some JVM flags	PSU
JDK-8217850	11	CompressedClassSpaceSizeInJmapHeap fails after JDK-8217612	PSU
JDK-8218471	11	generate-unsafe-access-tests.sh does not correctly invoke build.tools.spp.Spp	PSU
JDK-8219628	11	[TESTBUG] javadoc/doclet/InheritDocForUserTags fails with -othervm	PSU
JDK-8219804	8	java/net/MulticastSocket/Promiscuous.java fails intermittently due to NumberFormatException	PSU
JDK-8220410	11	sun/security/tools/jarsigner/warnings/NoTimestampTest.java failed with missing expected output	PSU
JDK-8221372	11	Test vmTestbase/nsk/jvmti/GetThreadState/thrstat001/TestDescription.java times out	PSU
JDK-8222323	11	ChildAlwaysOnTopTest.java fails with "RuntimeException: Failed to unset alwaysOnTop"	PSU
JDK-8223573	11	Replace wildcard address with loopback or local host in tests - part 4	PSU
JDK-8223714	11	HTTPSetAuthenticatorTest could be made more resilient	PSU
JDK-8223783	11	sun/net/www/http/HttpClient/MultiThreadTest.java sometimes detect threads+1 connections	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8223856	11	Replace wildcard address with loopback or local host in tests - part 8	PSU
JDK-8224617	11	(fs) java/nio/file/FileStore/Basic.java found filesystem twice	PSU
JDK-8224729	11	Cleanups in sun/security/provider/certpath/ldap/LDAPCertStoreImpl.java	PSU
JDK-8224768	11	Test ActalisCA.java fails	PSU
JDK-8225012	11, 17	sanity/client/SwingSet/src/ToolTipDemoTest.java fails on Windows	PSU
JDK-8225687	8	Newly added sspi.cpp in JDK-6722928 still contains some small errors	PSU
JDK-8226221	11	Update PKCS11 tests to use NSS 3.46 libs	PSU
JDK-8228341	11	SignTwice.java fails intermittently on Windows	PSU
JDK-8228403	11	SignTwice.java failed with java.io.FileNotFoundException: File name too long	PSU
JDK-8229147	11, 17	Linux os::create_thread() overcounts guardpage size with newer glibc (>=2.27)	PSU
JDK-8229333	11	java/io/File/SetLastModified.java timed out	PSU
JDK-8229338	11	clean up test/jdk/java/util/RandomAccess/Basic.java	PSU
JDK-8229348	11	java/net/DatagramSocket/UnreferencedDatagramSockets.java fails intermittently	PSU
JDK-8229481	11	sun/net/www/protocol/https/ChunkedOutputStream.java failed with a SSLException	PSU
JDK-8229912	11	[TESTBUG] java/net/Socks/SocksIPv6Test fails without IPv6	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8230132	11	java/net/NetworkInterface/NetworkInterfaceRetrievalTests.java to skip Teredo Tunneling Pseudo-Interface	PSU
JDK-8231037	11	java/net/InetAddress/ptr/Lookup.java fails intermittently due to reverse lookup failed	PSU
JDK-8231357	11	sun/security/pkcs11/Cipher/TestKATForGCM.java fails on SLES11 using mozilla-nss-3.14	PSU
JDK-8231516	11	network QuickAckTest.java failed due to "SocketException: maximum number of DatagramSockets reached"	PSU
JDK-8232101	11	(sctp) Add minimal sanity tests for SCTP	PSU
JDK-8232195	11	Enable BigInteger tests: DivisionOverflow, SymmetricRangeTests and StringConstructorOverflow	PSU
JDK-8232225	8	Rework the fix for JDK-8071483	PSU
JDK-8232840	11	java/math/BigInteger/largeMemory/SymmetricRangeTests.java fails due to "OutOfMemoryError: Requested array size exceeds VM limit"	PSU
JDK-8232922	11	Add java/math/BigInteger/largeMemory/SymmetricRangeTests.java to ProblemList-Xcomp	PSU
JDK-8234808	11	jdb quoted option parsing broken	PSU
JDK-8236045	11	[TESTBUG] MismatchedWhiteBox test fails with missing WhiteBox\$WhiteBoxPermission.class	PSU
JDK-8237183	11	Bug ID missing for test in patch which fixed JDK-8230665	PSU
JDK-8238157	11	security/infra/java/security/cert/CertPathValidator/certification/AmazonCA.java test failures because of revocation date	PSU

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JDK-8239007	11	java/math/BigInteger/largeMemory/ tests should be disabled on 32-bit platforms	PSU
JDK-8239264	11	Clearup the legacy ObjectIdentifier constructor from int array	PSU
JDK-8239333	11	Mark test AmazonCA.java with intermittent key	PSU
JDK-8239537	11	cgroup MetricsTester testMemorySubsystem fails sometimes when testing memory.kmem.tcp.usage_in_bytes	PSU
JDK-8240193	11	loadLibrary("osxsecurity") should not be removed	PSU
JDK-8240567	21	MethodTooLargeException thrown while creating a jlink image	PSU
JDK-8241097	11	java/math/BigInteger/largeMemory/SymmetricRangeTests.java requires -XX:+CompactStrings	PSU
JDK-8242151	11	Improve OID mapping and reuse among JDK security providers for aliases registration	PSU
JDK-8242897	11	KeyFactory.generatePublic(x509Spec) failed with java.security.InvalidKeyException	PSU
JDK-8243210	11	ClhsdbScanOops fails with NullPointerException in FileMapHeader.inCopiedVtableSpace	PSU
JDK-8244078	11	ProcessTools executeTestJvm and createJavaProcessBuilder have inconsistent handling of test.*.opts	PSU
JDK-8247895	11	SHA1PRNGReseed.java is calling setSeed(0)	PSU
JDK-8247968	11	test/jdk/javax/crypto/SecretKeyFactory/security.properties has wrong header	PSU
JDK-8248001	11	javadoc generates invalid HTML pages whose ftp:// links are broken	PSU

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JDK-8249699	11	java/io/ByteArrayOutputStream/MaxCapacity.java should use @requires instead of @ignore	PSU
JDK-8251517	11	[TESTBUG] com/sun/net/httpserver/bugs/B6393710.java does not scale socket timeout	PSU
JDK-8252530	11	Fix inconsistencies in hotspot whitebox	PSU
JDK-8252713	17	jtreg time out of CtrlASCII.java seems to hang the Xserver.	PSU
JDK-8253269	8	The CheckCommonColors test should provide more info on failure	PSU
JDK-8254350	11	CompletableFuture.get may swallow InterruptedException	PSU
JDK-8255348	11	NPE in PKIXCertPathValidator event logging code	PSU
JDK-8255548	17	Missing coverage for javax.xml.crypto.dom.DOMCryptoContext	PSU
JDK-8257993	11	vmTestbase/nsk/jvmti/RedefineClasses/StressRedefine/TestDescription.java crash intermittently	PSU
JDK-8259796	11	timed CompletableFuture.get may swallow InterruptedException	PSU
JDK-8260274	11	Cipher.init(int, key) does not use highest priority provider for random bytes	PSU
JDK-8260878	11	com/sun/jdi/JdbOptions.java fails without jfr	PSU
JDK-8260934	11	java/lang/StringBuilder/HugeCapacity.java fails without Compact Strings	PSU
JDK-8263044	17	jdk/jfr/jvm/TestDumpOnCrash.java timed out	PSU
JDK-8263970	11	Manual test javax/swing/JTextField/JapaneseReadingAttributes/JapaneseReadingAttributes.java failed	PSU

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JDK-8265980	11	Fix systemDictionary and loaderConstraints printing	PSU
JDK-8267188	17	gc/stringdedup/TestStringDeduplicationInterned.java fails with Shenandoah	PSU
JDK-8267341	17	macos attempt_reserve_memory_at(arg1, arg2, true) failure	PSU
JDK-8267517	17	async logging for stdout and stderr	PSU
JDK-8267860	17	Off-by-one bug when searching arrays in AlpnGreaseTest	PSU
JDK-8268457	11	XML Transformer outputs Unicode supplementary character incorrectly to HTML	PSU
JDK-8268464	11	Remove dependancy of TestHttpsServer, HttpTransaction, HttpCallback from open/test/jdk/sun/net/www/protocol/https/ tests	PSU
JDK-8268852	17	AsyncLogWriter should not override is_Named_thread()	PSU
JDK-8269091	11, 17	javax/sound/sampled/Clip/SetPositionHang.java failed with ArrayIndexOutOfBoundsException: Array index out of range: -4	PSU
JDK-8269466	17	Factor out the common code for initializing and starting internal VM JavaThreads	PSU
JDK-8270331	11, 17	[TESTBUG] Error: Not a test or directory containing tests: java/awt/print/PrinterJob/InitToBlack.java	PSU
JDK-8270794	17	Avoid loading Klass* twice in TypeArrayKlass::oop_size()	PSU
JDK-8270894	17	Use acquire semantics in ObjectSynchronizer::read_stable_mark()	PSU
JDK-8271707	17	migrate tests to use jdk.test.whitebox.WhiteBox	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8271838	11	AmazonCA.java interop test fails	PSU
JDK-8271898	17	disable os.release_multi_mappings_vm on macOS-X64	PSU
JDK-8272586	17	emit abstract machine code in hs-err logs	PSU
JDK-8272654	17	Mark word accesses should not use Access API	PSU
JDK-8273803	17	Zero: Handle "zero" variant in CommandLineOptionTest.java	PSU
JDK-8273807	11	Zero: Drop incorrect test block from compiler/startup/NumCompilerThreadsCheck.java	PSU
JDK-8274606	11	Fix jaxp/javax/xml/jaxp/unittest/transform/SurrogateTest.java test	PSU
JDK-8274986	17	max code printed in hs-err logs should be configurable	PSU
JDK-8275031	17	runtime/ErrorHandling/MachCodeFramesInErrorFile.java fails when hsdisk is present	PSU
JDK-8275234	11	java/awt/GraphicsDevice/DisplayModes/CycleDMImage.java is entered twice in ProblemList	PSU
JDK-8275303	11, 17	sun/java2d/pipe/InterpolationQualityTest.java fails with D3D basic render driver	PSU
JDK-8275415	17	Prepare Leak Profiler for Lilliput	PSU
JDK-8275662	17	remove test/lib/sun/hotspot	PSU
JDK-8276333	17	jdk/jfr/event/oldobject/TestLargeRootSet.java failed "assert(!contains(edge.reference())) failed: invariant"	PSU
JDK-8276651	11, 17	java/lang/ProcessHandle tests fail with "RuntimeException: Input/output error" in java.lang.ProcessHandleImpl\$Info.info0	PSU

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JDK-8276696	17	ParallelObjectIterator freed at the wrong time in VM_HeapDumper	PSU
JDK-8276799	17	Implementation of JEP 422: Linux/RISC-V Port	PSU
JDK-8277102	17	Dubious PrintCompilation output	PSU
JDK-8277353	11, 17	java/security/MessageDigest/ThreadSafetyTest.java test times out	PSU
JDK-8277417	17	C1 LIR instruction for load-klass	PSU
JDK-8277654	17	Shenandoah: Don't produce new memory state in C2 LRB runtime call	PSU
JDK-8277860	17	PPC: Remove duplicate info != NULL check	PSU
JDK-8278141	17	LIR_OpLoadKlass::_info shadows the field of the same name from LIR_Op	PSU
JDK-8278456	17	Define jtreg jdk_desktop test group time-based sub-tasks for use by headful testing.	PSU
JDK-8279536	11	jdk/nio/zipfs/ZipFSOutputStreamTest.java timed out	PSU
JDK-8279545	17	Buffer overrun in reverse_words of sharedRuntime_x86_64.cpp:3517	PSU
JDK-8280396	17	G1: Full gc mark stack draining should prefer to make work available to other threads	PSU
JDK-8280885	17	Shenandoah: Some tests failed with "EA: missing allocation reference path"	PSU
JDK-8281507	17	Two javac tests have bad jtreg <code>@clean</code> tags	PSU
JDK-8281717	17	Cover logout method for several LoginModule	PSU
JDK-8282404	17	DrawStringWithInfiniteXform.java failed with "RuntimeException: drawString with InfiniteXform transform takes long time"	PSU

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JDK-8282651	17	ZGC: vmTestbase/gc/ArrayJuggle/ tests fails intermittently with exit code 97	PSU
JDK-8282665	17	[REDO] ByteBufferTest.java: replace endless recursion with RuntimeException in void ck(double x, double y)	PSU
JDK-8283056	17	show abstract machine code in hs-err for all VM crashes	PSU
JDK-8283276	17	java/io/ObjectStreamClass/ObjectStreamClassCaching.java fails with various GCs	PSU
JDK-8283326	17	Implement SafeFetch statically	PSU
JDK-8283756	11, 17	(zipfs) ZipFSOutputStreamTest.testOutputStream should only check inflated bytes	PSU
JDK-8283865	17	riscv: Break down -XX:+UseRVB into separate options for each bitmanip extension	PSU
JDK-8284068	17	riscv: should call Atomic::release_store in JavaThread::set_thread_state	PSU
JDK-8284090	17	com/sun/security/auth/module/AllPlatforms.java fails to compile	PSU
JDK-8284273	17	Early crashes in os::print_context on AArch64	PSU
JDK-8284524	11	Create an automated test for JDK-4422362	PSU
JDK-8284760	17	Correct type/array element offset in LibraryCallKit::get_state_from_digest_object()	PSU
JDK-8284767	11	Create an automated test for JDK-4422535	PSU
JDK-8284937	17	riscv: should not allocate special register for temp	PSU
JDK-8284997	17	arm32 build crashes since JDK-8283326	PSU
JDK-8285303	17	riscv: Incorrect register mask in call_native_base	PSU

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JDK-8285437	17	riscv: Fix MachNode size mismatch for MacroAssembler::verify_oops*	PSU
JDK-8285635	11	javax/swing/JRootPane/DefaultButtonTest.java failed with Default Button not pressed for L&F: com.sun.java.swing.plaf.motif.MotifLookAndFeel	PSU
JDK-8285675	17	Temporary fix for arm32 SafeFetch	PSU
JDK-8285699	17	riscv: Provide information when hitting a HaltNode	PSU
JDK-8285711	17	riscv: RVC: Support disassembler show-bytes option	PSU
JDK-8285756	17	clean up use of bad arguments for <code>@clean</code> in langtools tests	PSU
JDK-8285980	17	Several tests in compiler/c2/irTests miss <code>@requires vm.compiler2.enabled</code>	PSU
JDK-8286172	11	Create an automated test for JDK-4516019	PSU
JDK-8286481	11, 17	Exception printed to stdout on Windows when storing transparent image in clipboard	PSU
JDK-8286620	11, 17	Create regression test for verifying <code>setMargin()</code> of <code>JRadioButton</code>	PSU
JDK-8286623	17	Bundle zlib by default with JDK on macos aarch64	PSU
JDK-8287073	8	NPE from <code>CgroupV2Subsystem.getInstance()</code>	PSU
JDK-8287227	17	Shenandoah: A couple of virtual thread tests failed with iu mode even without Loom enabled.	PSU
JDK-8287418	17	riscv: Fix correctness issue of MacroAssembler::movptr	PSU
JDK-8287552	17	riscv: Fix comment typo in li64	PSU
JDK-8287663	8	Add a regression test for JDK-8287073	PSU
JDK-8287970	17	riscv: <code>jdk/incubator/vector/*VectorTests</code> failing	PSU

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JDK-8288719	17	[arm32] SafeFetch32 thumb interleaving causes random crashes	PSU
JDK-8289077	17	Add manual tests to open	PSU
JDK-8289238	17	Refactoring changes to PassFailJFrame Test Framework	PSU
JDK-8289508	11	Improve test coverage for XPath Axes: ancestor, ancestor-or-self, preceding, and preceding-sibling	PSU
JDK-8289510	17	Improve test coverage for XPath Axes: namespace	PSU
JDK-8289512	17	Fix GCC 12 warnings for adlc output_c.cpp	PSU
JDK-8289547	17	Update javax/swing/Popup/TaskbarPositionTest.java	PSU
JDK-8289688	17	jfr command hangs when it processes invalid file	PSU
JDK-8289748	11, 17	C2 compiled code crashes with SIGFPE with -XX:+StressLCM and -XX:+StressGCM	PSU
JDK-8289797	17	tools/launcher/I18NArgTest.java fails on Japanese Windows environment	PSU
JDK-8289917	17	Metadata for regionsRefilled of G1EvacuationStatistics event is wrong	PSU
JDK-8290137	17	riscv: small refactoring for add_memory_int32/64	PSU
JDK-8290164	17	compiler/runtime/TestConstantsInError.java fails on riscv	PSU
JDK-8290464	17	Optimize ResourceArea zapping on ResourceMark release	PSU
JDK-8290469	17	Add new positioning options to PassFailJFrame test framework	PSU
JDK-8290496	17	riscv: Fix build warnings-as-errors with GCC 11	PSU

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JDK-8291830	11, 17	jvmti/RedefineClasses/StressRedefine failed: assert(!is_null(v)) failed: narrow klass value can never be zero	PSU
JDK-8291893	17	riscv: remove fence.i used in user space	PSU
JDK-8291947	17	riscv: fail to build after JDK-8290840	PSU
JDK-8291952	17	riscv: Remove PRAGMA_NONNULL_IGNORED	PSU
JDK-8292033	11	Move jdk.X509Certificate event logic to JCA layer	PSU
JDK-8292182	17	[TESTLIB] Enhance JAXPPolicyManager to setup required permissions for jtreg version 7 jar	PSU
JDK-8292297	11	Fix up loading of override java.security properties file	PSU
JDK-8292315	17	Tests should not rely on specific JAR file names (hotspot)	PSU
JDK-8292316	17	Tests should not rely on specific JAR file names (jpackage)	PSU
JDK-8292443	11	Weak CAS VarHandle/Unsafe tests should test always-failing cases	PSU
JDK-8292683	17	Remove BadKeyUsageTest.java from Problem List	PSU
JDK-8292698	17	Improve performance of DataInputStream	PSU
JDK-8292867	17	RISC-V: Simplify weak CAS return value handling	PSU
JDK-8293012	17	ConstantPool::print_on can crash if _cache is NULL	PSU
JDK-8293050	17	RISC-V: Remove redundant non-null assertions about macro-assembler	PSU
JDK-8293100	17	RISC-V: Need to save and restore callee-saved FloatRegisters in StubGenerator::generate_call_stub	PSU
JDK-8293114	17, 21	JVM should trim the native heap	PSU

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JDK-8293166	17	jdk/jfr/jvm/TestDumpOnCrash.java fails on Linux ppc64le and Linux aarch64	PSU
JDK-8293177	17	Verify version numbers in legal files	PSU
JDK-8293180	11, 17	JQuery UI license file not updated	PSU
JDK-8293252	17	Shenandoah: ThreadMXBean synchronizer tests crash with aggressive heuristics	PSU
JDK-8293474	17	RISC-V: Unify the way of moving function pointer	PSU
JDK-8293524	17	RISC-V: Use macro-assembler functions as appropriate	PSU
JDK-8293562	11	KeepAliveCache Blocks Threads while Closing Connections	PSU
JDK-8293566	17	RISC-V: Clean up push and pop registers	PSU
JDK-8293657	11	sun/management/jmxremote/bootstrap/RmiBootstrapTest.java#id1 failed with "SSLHandshakeException: Remote host terminated the handshake"	PSU
JDK-8293811	17	Provide a reason for PassFailJFrame.forceFail	PSU
JDK-8293851	17	hs_err should print more stack in hex dump	PSU
JDK-8293858	11	Change PKCS7 code to use default SecureRandom impl instead of SHA1PRNG	PSU
JDK-8294012	17	RISC-V: get/put_native_u8 missing the case when address&7 is 6	PSU
JDK-8294083	17	RISC-V: Minimal build failed with --disable-precompiled-headers	PSU
JDK-8294086	17	RISC-V: Cleanup InstructionMark usages in the backend	PSU

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JDK-8294087	17	RISC-V: RVC: Fix a potential alignment issue and add more alignment assertions for the patchable calls/nops	PSU
JDK-8294187	17	RISC-V: Unify all relocations for the backend into AbstractAssembler::relocate()	PSU
JDK-8294323	17	Improve Shared Class Data	PSU
JDK-8294366	17	RISC-V: Partially mark out incompressible regions	PSU
JDK-8294430	17	RISC-V: Small refactoring for movptr_with_offset	PSU
JDK-8294492	17	RISC-V: Use li instead of patchable movptr at non-patchable callsites	PSU
JDK-8294679	17	RISC-V: Misc crash dump improvements	PSU
JDK-8295110	17	RISC-V: Mark out relocations as incompressible	PSU
JDK-8295270	17	RISC-V: Clean up and refactoring for assembler functions	PSU
JDK-8295396	17	RISC-V: Cleanup useless CompressibleRegions	PSU
JDK-8295657	17	SA: Allow larger object alignments	PSU
JDK-8295737	11, 17	macOS: Print content cut off when width > height with portrait orientation	PSU
JDK-8295811	17	serviceability/sa/TestObjectAlignment.java fails on x86_32	PSU
JDK-8295812	17	Skip the "half float" support in LittleCMS during the build	PSU
JDK-8295894	8, 11, 17	Remove SECOM certificate that is expiring in September 2023	PSU
JDK-8295926	17	RISC-V: C1: Fix LIRGenerator::do_LibmIntrinsic	PSU
JDK-8295968	17	RISC-V: Rename some assembler intrinsic functions for RVV 1.0	PSU

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JDK-8296084	11	javax/swing/JSpinner/4788637/bug4788637.java fails intermittently on a VM	PSU
JDK-8296384	17	[TESTBUG] sun/security/provider/SecureRandom/AbstractDrbg/SpecTest.java intermittently timeout	PSU
JDK-8296435	17	RISC-V: Small refactoring for increment/decrement	PSU
JDK-8296447	17	RISC-V: Make the operands order of vrsub_vx/vrsub_vi consistent with RVV 1.0 spec	PSU
JDK-8296448	17	RISC-V: Fix temp usages of heapbase register killed by MacroAssembler::en/decode_klass_not_null	PSU
JDK-8296565	17	Enhanced archival support	PSU
JDK-8296602	17	RISC-V: improve performance of copy_memory stub	PSU
JDK-8296771	17	RISC-V: C2: assert(false) failed: bad AD file	PSU
JDK-8296796	17	Provide clean, platform-agnostic interface to C-heap trimming	PSU
JDK-8296916	17	RISC-V: Move some small macro-assembler functions to header file	PSU
JDK-8297359	17	RISC-V: improve performance of floating Max Min intrinsics	PSU
JDK-8297437	11	javadoc cannot link to old docs (with old style anchors)	PSU
JDK-8297476	17	Increase InlineSmallCode default from 1000 to 2500 for RISC-V	PSU
JDK-8297523	11	Various GetPrimitiveArrayCritical miss result - NULL check	PSU
JDK-8297587	11	Upgrade JLine to 3.22.0	PSU

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JDK-8297644	17	RISC-V: Compilation error when shenandoah is disabled	PSU
JDK-8297681	11, 17	Unnecessary color conversion during 4BYTE_ABGR_PRE to INT_ARGB_PRE blit	PSU
JDK-8297697	17	RISC-V: Add support for SATP mode detection	PSU
JDK-8297715	17	RISC-V: C2: Use single-bit instructions from the Zbs extension	PSU
JDK-8297730	11	C2: Arraycopy intrinsic throws incorrect exception	PSU
JDK-8297887	11, 17	Update Siphash	PSU
JDK-8297923	11, 17	java.awt.ScrollPane broken after multiple scroll up/down	PSU
JDK-8297955	11	LDAP CertStore should use LdapName and not String for DN's	PSU
JDK-8298138	17	Shenandoah: HdrSeq asserts "sub-bucket index (512) overflow for value (1.00)"	PSU
JDK-8298676	8, 11, 17	Enhanced Look and Feel	PSU
JDK-8298921	11, 17	Create a regression test for JDK-8139581	PSU
JDK-8299158	17	Improve MD5 intrinsic on AArch64	PSU
JDK-8299168	17	RISC-V: Fix MachNode size mismatch for MacroAssembler::_verify_oops*	PSU
JDK-8299424	11	containers/docker/TestMemoryWithCgroupV1.java fails on SLES12 ppc64le when testing Memory and Swap Limit	PSU
JDK-8299617	17	CurrencySymbols.properties is missing the copyright notice	PSU
JDK-8299658	11, 17, 21	C1 compilation crashes in LinearScan::resolve_exception_edge	PSU

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JDK-8299713	11, 17	Test javax/swing/JTableHeader/6889007/bug6889007. java failed: Wrong type of cursor	PSU
JDK-8299827	17	Add resolved IP address in connection exception for sockets	PSU
JDK-8299847	17	RISC-V: Improve PrintOptoAssembly output of CMovel/L nodes	PSU
JDK-8299962	17	Speed up compiler/intrinsics/unsafe/DirectByteBufferTest.java and HeapByteBufferTest.java	PSU
JDK-8300053	17	Shenandoah: Handle more GCCauses in ShenandoahControlThread::request_gc	PSU
JDK-8300098	11, 17	java/util/concurrent/ConcurrentHashMap/ConcurrentAssociateTest.java fails with internal timeout when executed with TieredCompilation1/3	PSU
JDK-8300109	17	RISC-V: Improve code generation for Minl/Maxl nodes	PSU
JDK-8300285	11, 17	Enhance TLS data handling	PSU
JDK-8300405	17	Screen capture for test JFileChooserSetLocationTest.java, failure case	PSU
JDK-8300584	17	Accelerate AVX-512 CRC32C for small buffers	PSU
JDK-8300596	8, 11, 17	Enhance Jar Signature validation	PSU
JDK-8300659	11, 17	Refactor TestMemoryAwareness to use WhiteBox api for host values	PSU
JDK-8300693	17	Lower the compile threshold and reduce the iterations of warmup loop in VarHandles tests	PSU
JDK-8300751	11	[17u] Remove duplicate entry in javac.properties	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8301033	17	RISC-V: Handle special cases for Minl/Maxl nodes for Zbb	PSU
JDK-8301036	17	RISC-V: Factor out functions baseOffset & baseOffset32 from MacroAssembler	PSU
JDK-8301067	17	RISC-V: better error message when reporting unsupported satp modes	PSU
JDK-8301074	17	Replace NULL with nullptr in share/opto/	PSU
JDK-8301119	8	Support for GB18030-2022	PSU
JDK-8301153	17	RISC-V: pipeline class for several instructions is not set correctly	PSU
JDK-8301167	17	Update VerifySignedJar to actually exercise and test verification	PSU
JDK-8301187	17	Memory leaks in OopMapCache	PSU
JDK-8301269	11, 17	Update Commons BCEL to Version 6.7.0	PSU
JDK-8301313	17	RISC-V: C2: assert(false) failed: bad AD file due to missing match rule	PSU
JDK-8301367	17	Add exception handler method to the BaseLdapServer	PSU
JDK-8301491	11	C2: java.lang.StringUTF16::indexOfChar intrinsic called with negative character argument	PSU
JDK-8301628	17	RISC-V: c2 fix pipeline class for several instructions	PSU
JDK-8301700	8, 11, 17	Increase the default TLS Diffie-Hellman group size from 1024-bit to 2048-bit	PSU
JDK-8301818	17	RISC-V: Factor out function mvw from MacroAssembler	PSU
JDK-8301852	17	RISC-V: Optimize class atomic when order is memory_order_relaxed	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8301959	11, 17	Compile command in <code>compiler.loopopts.TestRemoveEmptyCountedLoop</code> does not work	PSU
JDK-8301998	11, 17	Update HarfBuzz to 7.0.1	PSU
JDK-8302017	21	Allocate <code>BadPaddingException</code> only if it will be thrown	PSU
JDK-8302084	11, 17	Enhanced font rendering	PSU
JDK-8302114	17	RISC-V: Several foreign jtreg tests fail with debug build after JDK-8301818	PSU
JDK-8302150	17	Speed up <code>compiler/codegen/Test7100757.java</code>	PSU
JDK-8302161	11, 17	Upgrade jQuery UI to version 1.13.2	PSU
JDK-8302182	11, 17	Update Public Suffix List to 88467c9	PSU
JDK-8302289	17	RISC-V: Use <code>bgez</code> instruction in <code>arraycopy_simple_check</code> when possible	PSU
JDK-8302475	11, 17	Enhance HTTP client file downloading	PSU
JDK-8302483	11, 17	Enhance ZIP performance	PSU
JDK-8302736	17	Major performance regression in <code>Math.log</code> on <code>aarch64</code>	PSU
JDK-8302776	17	RISC-V: Fix typo <code>CSR_INSTERT</code> to <code>CSR_INSTRET</code>	PSU
JDK-8303047	17	avoid NULL after 8301661	PSU
JDK-8303154	17	Investigate and improve instruction cache flushing during compilation	PSU
JDK-8303215	17	Make thread stacks not use huge pages	PSU
JDK-8303279	17	C2: crash in <code>SubTypeCheckNode::sub()</code> at <code>IGVN</code> split if	PSU
JDK-8303376	11, 17	Better launching of JDI	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8303511	11	C2: assert(get_ctrl(n) == cle_out) during unrolling	PSU
JDK-8303809	8, 17	Dispose context in SPNEGO NegotiatorImpl	PSU
JDK-8303815	21	Improve Metaspace test speed	PSU
JDK-8304054	11	Linux: NullPointerException from FontConfiguration.getVersion in case no fonts are installed	PSU
JDK-8304293	17	RISC-V: JDK-8276799 missed atomic intrinsic support for C1	PSU
JDK-8304295	11, 17	harfbuzz build fails with GCC 7 after JDK-8301998	PSU
JDK-8304314	17	StackWalkTest.java fails after CODETOOLS-7903373	PSU
JDK-8304460	17	Improve array usages	PSU
JDK-8304468	8, 11, 17	Better array usages	PSU
JDK-8304498	11	JShell does not switch to raw mode when there is no /bin/test	PSU
JDK-8304725	17	AsyncGetCallTrace can cause SIGBUS on M1	PSU
JDK-8304845	17	Update PCSC-Lite for Suse Linux to 1.9.9 and fix incomplete license wording	PSU
JDK-8304954	21	SegmentedCodeCache fails when using large pages	PSU
JDK-8304976	17	Optimize DateTimeFormatterBuilder.ZoneTextPrinterParser.getTree()	PSU
JDK-8305006	17	Use correct register in riscv_enc_fast_unlock()	PSU
JDK-8305008	17	RISC-V: Factor out immediate checking functions from assembler_riscv.inline.hpp	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8305074	11	ProblemList javax/net/ssl/DTLS/RespondToRetransmit.java	PSU
JDK-8305112	17	RISC-V: Typo fix for RVC description	PSU
JDK-8305236	17	Some LoadLoad barriers in the interpreter are unnecessary after JDK-8220051	PSU
JDK-8305312	8, 11, 17	Enhanced path handling	PSU
JDK-8305421	11, 17	Work around JDK-8305420 in CDSJDITest.java	PSU
JDK-8305425	17	Thread.isAlive0 doesn't need to call into the VM	PSU
JDK-8305512	17	RISC-V: Enable RVC extension by default on supported hardware	PSU
JDK-8305670	17	Performance regression in LockSupport.unpark with lots of idle threads	PSU
JDK-8305728	17	RISC-V: Use bexti instruction to do single-bit testing	PSU
JDK-8305763	11, 17	Parsing a URI with an underscore goes through a silent exception, negatively impacting performance	PSU
JDK-8305766	11, 17	ProblemList runtime/CompressedOops/CompressedClassPointers.java	PSU
JDK-8305858	17	Resolve multiple definition of 'handleSocketError' when statically linking with JDK native libraries	PSU
JDK-8305950	11, 17	Have -XshowSettings option display tzdata version	PSU
JDK-8305995	17	Footprint regression from JDK-8224957	PSU
JDK-8306060	17	Open source few AWT Insets related tests	PSU
JDK-8306076	17	Open source AWT misc tests	PSU
JDK-8306133	11	Open source few AWT Drag & Drop related tests	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8306134	17	Open source some AWT tests relating to Button and a few other classes	PSU
JDK-8306135	17	Clean up and open source some AWT tests	PSU
JDK-8306137	11, 17	Open source several AWT ScrollPane related tests	PSU
JDK-8306372	17	Open source AWT CardLayout and Checkbox tests	PSU
JDK-8306428	17	RunThese30M.java crashed with assert(earlyFlag() == currentFlag() earlyFlag() == mtNone)	PSU
JDK-8306430	17	Open source some AWT tests related to TextComponent and Toolkit	PSU
JDK-8306435	17	Juggle04/TestDescription.java should be a booleanArr test and not a byteArr one	PSU
JDK-8306484	11, 17	Open source several AWT Choice jtreg tests	PSU
JDK-8306566	17	Open source several clipboard AWT tests	PSU
JDK-8306575	17	Clean up and open source four Dialog related tests	PSU
JDK-8306636	11, 17	Disable compiler/c2/Test6905845.java with -XX:TieredStopAtLevel=3	PSU
JDK-8306638	11, 17	Open source some AWT tests related to datatransfer and Toolkit	PSU
JDK-8306667	17	RISC-V: Fix storeImmN0 matching rule by using zr register	PSU
JDK-8306682	11, 17	Open source a few more AWT Choice tests	PSU
JDK-8306718	11, 17	Optimize and opensource some old AWT tests	PSU
JDK-8306738	17	Select num workers for safepoint ParallelCleanupTask	PSU
JDK-8306765	17	Some client related jtreg problem list entries are malformed	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8306812	17	Open source several AWT Miscellaneous tests	PSU
JDK-8306954	11	Open source five Focus related tests	PSU
JDK-8306955	11	Open source several JComboBox jtreg tests	PSU
JDK-8307067	17	remove broken EnableThreadSMRExtraValidityChecks option	PSU
JDK-8307068	17	store a <code>JavaThread*</code> in the <code>java.lang.Thread</code> object after the <code>JavaThread*</code> is added to the main <code>ThreadsList</code>	PSU
JDK-8307078	11, 17	Opensource and clean up five more AWT Focus related tests	PSU
JDK-8307079	17	Update test <code>java/awt/Choice/DragOffNoSelect.java</code>	PSU
JDK-8307080	11	Open source some more JComboBox jtreg tests	PSU
JDK-8307083	17	Open source some drag and drop tests 3	PSU
JDK-8307128	11	Open source some drag and drop tests 4	PSU
JDK-8307133	11	Open source some JTable jtreg tests	PSU
JDK-8307135	11	<code>java/awt/dnd/NotReallySerializableTest/NotReally SerializableTest.java</code> failed	PSU
JDK-8307147	17	[x86] Dangling pointer warning for <code>Assembler::_attributes</code>	PSU
JDK-8307150	17	RISC-V: Remove remaining StoreLoad barrier with <code>UseCondCardMark</code> for Serial/Parallel GC	PSU
JDK-8307156	17	<code>native_thread</code> not protected by TLH	PSU
JDK-8307165	17	<code>java/awt/dnd/NoFormatsDropTest/NoFormatsDro pTest.java</code> timed out	PSU
JDK-8307299	17	Move more DnD tests to open	PSU
JDK-8307301	11, 17	Update HarfBuzz to 7.2.0	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8307348	17	Parallelize heap walk for ObjectCount(AfterGC) JFR event collection	PSU
JDK-8307395	17	Add missing STS to Shenandoah	PSU
JDK-8307446	17	RISC-V: Improve performance of floating point to integer conversion	PSU
JDK-8307526	17	[JFR] Better handling of tampered JFR repository	PSU
JDK-8307555	17	Reduce memory reads in x86 MD5 intrinsic	PSU
JDK-8307569	11, 17	Build with gcc8 is broken after JDK-8307301	PSU
JDK-8307572	11, 17	AArch64: Vector registers are clobbered by some macroassemblers	PSU
JDK-8307603	11, 17	[AIX] Broken build after JDK-8307301	PSU
JDK-8307604	11, 17	gcc12 based Alpine build broken build after JDK-8307301	PSU
JDK-8307651	17	RISC-V: stringL_indexof_char instruction has wrong format string	PSU
JDK-8307653	17	Adjust delay time and gc log argument in TestAbortOnVMOperationTimeout	PSU
JDK-8307683	17	Loop Predication should not hoist range checks with trap on success projection by negating their condition	PSU
JDK-8307766	17, 21	Linux: Provide the option to override the timer slack	PSU
JDK-8307799	11	Newly added java/awt/dnd/MozillaDnDTest.java has invalid jtreg <code>@requires</code> clause	PSU
JDK-8308042	21	[macOS] Developer ID Application Certificate not picked up by jpackage if it contains UNICODE characters	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8308047	21	java/util/concurrent/ScheduledThreadPoolExecutor/BasicCancelTest.java timed out and also had jcmd pipe errors	PSU
JDK-8308089	17	[riscv-port-jdk17u] Intrinsicify Unsafe.storeStoreFence	PSU
JDK-8308090	17	Add container tests for on-the-fly resource quota updates	PSU
JDK-8308152	17	PropertyDescriptor should work with overridden generic getter method	PSU
JDK-8308156	11, 17	VerifyCACerts.java misses blank in error output	PSU
JDK-8308184	21	Launching java with large number of jars in classpath with java.protocol.handler.pkgs system property set can lead to StackOverflowError	PSU
JDK-8308192	17	Error in parsing replay file when staticfield is an array of single dimension	PSU
JDK-8308204	8, 11, 17	Enhanced certificate processing	PSU
JDK-8308232	17	nsk/jdb tests don't pass -verbose flag to the debuggee	PSU
JDK-8308277	17	RISC-V: Improve vectorization of Match.sqrt() on floats	PSU
JDK-8308300	17	enhance exceptions in MappedMemoryUtils.c	PSU
JDK-8308474	21	DSA does not reset SecureRandom when initSign is called again	PSU
JDK-8308609	21	java/lang/ScopedValue/StressStackOverflow.java fails with "-XX:-VMContinuations"	PSU
JDK-8308643	17	Incorrect value of 'used' jvmstat counter	PSU
JDK-8308682	11, 17	Enhance AES performance	PSU
JDK-8308766	17	TLAB initialization may cause div by zero	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8308788	8	[8u] Remove duplicate HaricaCA.java test	PSU
JDK-8308803	17	Improve java/util/UUID/UUIDTest.java	PSU
JDK-8308872	17	enhance logging and some exception in krb5/Config.java	PSU
JDK-8308997	17	RISC-V: Sign extend when comparing 32-bit value with zero instead of testing the sign bit	PSU
JDK-8309032	21	jpackage does not work for module projects unless --module-path is specified	PSU
JDK-8309088	11, 17, 21	security/infra/java/security/cert/CertPathValidator/certification/AmazonCA.java fails	PSU
JDK-8309095	17	Remove UTF-8 character from TaskbarPositionTest.java	PSU
JDK-8309119	17	[17u/11u] Redo JDK-8297951: C2: Create skeleton predicates for all If nodes in loop predication	PSU
JDK-8309138	11, 17	Fix container tests for jdks with symlinked conf dir	PSU
JDK-8309214	21	sun/security/pkcs11/KeyStore/CertChainRemoval.java fails after 8301154	PSU
JDK-8309228	17	Clarify EXPERIMENTAL flags comment in hotspot/share/runtime/globals.hpp	PSU
JDK-8309254	17	Implement fast-path for ASCII-compatible CharsetEncoders on RISC-V	PSU
JDK-8309266	17	C2: assert(final_con == (jlong)final_int) failed: final value should be integer	PSU
JDK-8309297	17	Adjust ShenandoahHeap print_heap_regions_on	PSU
JDK-8309340	17	Provide sctpHandleSocketErrorWithMessage	PSU
JDK-8309427	17	[riscv-port-jdk17u] Remove unused RoundDoubleModeV C2 node	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8309475	21	Test java/foreign/TestByteBuffer.java fails: a problem with msync (aix)	PSU
JDK-8309502	21	RISC-V: String.indexOf intrinsic may produce misaligned memory loads	PSU
JDK-8309550	17	jdk.jfr.internal.Utils::formatDataAmount method should gracefully handle amounts equal to Long.MIN_VALUE	PSU
JDK-8309591	17, 21	Socket.setOption(TCP_QUICKACK) uses wrong level	PSU
JDK-8309613	17	[Windows] hs_err files sometimes miss information about the code containing the error	PSU
JDK-8309862	17	Unsafe list operations in JfrStringPool	PSU
JDK-8309889	21	[s390] Missing return statement after calling jump_to_native_invoker method in generate_method_handle_dispatch.	PSU
JDK-8309956	17	Shenandoah: Strengthen the mark word check in string dedup	PSU
JDK-8309959	17	JFR: Display N/A for missing data amount	PSU
JDK-8310026	8	[8u] make java_lang_String::hash_code consistent across platforms	PSU
JDK-8310054	11, 17	ScrollPane insets are incorrect	PSU
JDK-8310106	21	sun.security.ssl.SSLHandshake.getHandshakeProducer() incorrectly checks handshakeConsumers	PSU
JDK-8310126	17	C1: Missing receiver null check in Reference::get intrinsic	PSU
JDK-8310176	11	JDK 11 G1 crash during full GC with +UseStringDeduplication	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8310211	21	serviceability/jvmti/thread/GetStackTrace/getstacktr03/getstacktr03.java failing	PSU
JDK-8310233	21	Fix THP detection on Linux	PSU
JDK-8310268	21	RISC-V: misaligned memory access in String.Compare intrinsic	PSU
JDK-8310549	17	avoid potential leaks in KeystoreImpl.m related to JNU_CHECK_EXCEPTION early returns	PSU
JDK-8310551	17	vmTestbase/nsk/jdb/interrupt/interrupt001/interrupt001.java timed out due to missing prompt	PSU
JDK-8310586	21	ProblemList java/lang/ScopedValue/StressStackOverflow.java #default with virtual threads on linux-all	PSU
JDK-8310620	11	[11u] Problemlist failing aot tests on macos x64	PSU
JDK-8310687	21	JDK-8303215 is incomplete	PSU
JDK-8310873	17, 21	Re-enable locked_create_entry symbol check in runtime/NMT/CheckForProperDetailStackTrace.java for RISC-V	PSU
JDK-8310947	8	gb18030-2000 not selectable with LANG=zh_CN.GB18030 after JDK-8301119	PSU
JDK-8311026	21	Some G1 specific tests do not set -XX:+UseG1GC	PSU
JDK-8311033	11, 17, 21	[macos] PrinterJob does not take into account Sides attribute	PSU
JDK-8311160	21	[macOS, Accessibility] VoiceOver: No announcements on JRadioButtonMenuItem and JCheckBoxMenuItem	PSU
JDK-8311249	17, 21	Remove unused MemAllocator::obj_memory_range	PSU
JDK-8311285	17, 21	report some fontconfig related environment variables in hs_err file	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8311511	21	Improve description of NativeLibrary JFR event	PSU
JDK-8311592	21	ECKeysizeParameterSpec causes too many exceptions on third party providers	PSU
JDK-8311682	21	Change milestone to fcs for all releases	PSU
JDK-8311689	11, 17	Wrong visible amount in Adjustable of ScrollPane	PSU
JDK-8311862	17, 21	RISC-V: small improvements to shift immediate instructions	PSU
JDK-8311917	21	MAP_FAILED definition seems to be obsolete in src/java.desktop/unix/native/common/awt/fontpath.c	PSU
JDK-8311921	21	Inform about MaxExpectedDataSegmentSize in case of pthread_create failures on AIX	PSU
JDK-8311923	17, 21	TestIRMatching.java fails on RISC-V	PSU
JDK-8311926	21	java/lang/ScopedValue/StressStackOverflow.java takes 9mins in tier1	PSU
JDK-8311981	21	Test gc/stringdedup/TestStringDeduplicationAgeThreshold.java#ZGenerational timed out	PSU
JDK-8312029	17	Add CriticalNative tests to ProblemList for 8312028	PSU
JDK-8312127	21	FileDescriptor.sync should temporarily increase parallelism	PSU
JDK-8312138	11	jcmm VM.metaspace vlist has no newline character before the Class: label.	PSU
JDK-8312180	21	(bf) MappedMemoryUtils passes incorrect arguments to msync (aix)	PSU
JDK-8312182	21	THPs cause huge RSS due to thread start timing issue	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8312394	21	[linux] SIGSEGV if kernel was built without hugepage support	PSU
JDK-8312395	21	Improve assertions in growableArray	PSU
JDK-8312401	21	SymbolTable::do_add_if_needed hangs when called in InstanceKlass::add_initialization_error path with requesting length exceeds max_symbol_length	PSU
JDK-8312489	21	Increase jdk.jar.maxSignatureFileSize default which is too low for JARs such as WhiteSource/Mend unified agent jar	PSU
JDK-8312525	17, 21	New test runtime/os/TestTrimNative.java#trimNative is failing: did not see the expected RSS reduction	PSU
JDK-8312535	21	MidiSystem.getSoundbank() throws unexpected SecurityException	PSU
JDK-8312555	11, 17, 21	Ideographic characters aren't stretched by AffineTransform.scale(2, 1)	PSU
JDK-8312573	21	Failure during CompileOnly parsing leads to ShouldNotReachHere	PSU
JDK-8312585	21	Rename DisableTHPStackMitigation flag to THPStackMitigation	PSU
JDK-8312591	21	GCC 6 build failure after JDK-8280982	PSU
JDK-8312619	21	Strange error message when switching over long	PSU
JDK-8312620	21	WSL Linux build crashes after JDK-8310233	PSU
JDK-8312625	21	Test serviceability/dcmd/vm/TrimLibcHeapTest.java failed: RSS use increased	PSU
JDK-8312909	21	C1 should not inline through interface calls with non-subtype receiver	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8312976	21	MatchResult produces StringIndexOutOfBoundsException for groups outside match	PSU
JDK-8312984	21	javac may crash on a record pattern with too few components	PSU
JDK-8313081	21	MonitoringSupport_lock should be unconditionally initialized after 8304074	PSU
JDK-8313159	11	[11u] Fix test SSLEngineKeyLimit.java after Merge error	PSU
JDK-8313248	21	C2: setScopedValueCache intrinsic exposes nullptr pre-values to store barriers	PSU
JDK-8313262	17, 21	C2: Sinking node may cause required cast to be dropped	PSU
JDK-8313307	21	java/util/Formatter/Padding.java fails on some Locales	PSU
JDK-8313312	21	Add missing classpath exception copyright header	PSU
JDK-8313323	21	javac -g on a java file which uses unnamed variable leads to ClassFormatError when launching that class	PSU
JDK-8313402	17, 21	C1: Incorrect LoadIndexed value numbering	PSU
JDK-8313602	21	increase timeout for jdk/classfile/CorpusTest.java	PSU
JDK-8313626	21	C2 crash due to unexpected exception control flow	PSU
JDK-8313657	21	com.sun.jndi.ldap.Connection.cleanup does not close connections on SocketTimeoutErrors	PSU
JDK-8313676	17, 21	Amend TestLoadIndexedMismatch test to target intrinsic directly	PSU
JDK-8313678	17, 21	SymbolTable can leak Symbols during cleanup	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8313691	21	use close after failing os::fdopen in vmError and ciEnv	PSU
JDK-8313752	21	InstanceClassFlags::print_on doesn't print the flag names	PSU
JDK-8313796	11, 17, 21	AsyncGetCallTrace crash on unreadable interpreter method pointer	PSU
JDK-8313803	11	[11u] Exclude jdk/jfr/event/sampling/TestStackFrameLineNumbers.java	PSU
JDK-8313815	17	The exception messages printed by jcmd ManagementAgent.start are corrupted on Japanese Windows	PSU
JDK-8313874	17, 21	JNI NewWeakGlobalRef throws exception for null arg	PSU
JDK-8313878	11	Exclude two compiler/rtm/locking tests on ppc64le	PSU
JDK-8313901	21	[TESTBUG] test/hotspot/jtreg/compiler/codecache/CodeCacheFullCountTest.java fails with java.lang.VirtualMachineError	PSU
JDK-8313904	21	[macos] All signing tests which verifies unsigned app images are failing	PSU
JDK-8314020	17, 21	Print instruction blocks in byte units	PSU
JDK-8314024	17, 21	SIGSEGV in PhaseldealLoop::build_loop_late_post_work due to bad immediate dominator info	PSU
JDK-8314063	21	The socket is not closed in Connection::createSocket when the handshake failed for LDAP connection	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8314086	11	[11u] A typo in the fix for JDK-8312462 is causing test failure in ChildAlwaysOnTopTest.java	PSU
JDK-8314117	17, 21	RISC-V: Incorrect VMReg encoding in RISC64Frame.java	PSU
JDK-8314139	21	TEST_BUG: runtime/os/THPsInThreadStackPreventionTest.java could fail on machine with large number of cores	PSU
JDK-8314144	21	gc/g1/ihop/TestIHOPStatic.java fails due to extra concurrent mark with -Xcomp	PSU
JDK-8314216	21	Case enumConstant, pattern compilation fails	PSU
JDK-8314423	21	Multiple patterns without unnamed variables	PSU
JDK-8314426	17, 21	runtime/os/TestTrimNative.java is failing on slow machines	PSU
JDK-8314501	17, 21	Shenandoah: sun/tools/jhsdb/heapconfig/JMapHeapConfigTest.java fails	PSU
JDK-8314517	17, 21	some tests fail in case ipv6 is disabled on the machine	PSU
JDK-8314552	17	Fix javadoc tests to work with jtreg 7	PSU
JDK-8314618	21	RISC-V: -XX:MaxVectorSize does not work as expected	PSU
JDK-8314679	21	SA fails to properly attach to JVM after having just detached from a different JVM	PSU
JDK-8314850	21	SharedRuntime::handle_wrong_method() gets called too often when resolving Continuation.enter	PSU
JDK-8314950	11	CMS may miss NMT tag after mark stack expansion	PSU
JDK-8314960	8, 11, 17, 21	Add Certigna Root CA - 2	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8315051	21	jdk/jfr/jvm/TestGetEventWriter.java fails with non-JVMCI GCs	PSU
JDK-8315135	8, 11	Memory leak in the native implementation of Pack200.Unpacker.unpack()	PSU
JDK-8315529	11	[11u] Exclude some failing Z-GC tests	PSU
JDK-8315534	21	Incorrect warnings about implicit annotation processing	PSU
JDK-8316566	17	RISC-V: Zero extended narrow oop passed to Atomic::cmpxchg	PSU
JDK-8317700	17	[17u] Undo backport 8317674 of 8316566 which was pushed to wrong repo.	PSU

OpenJFX Bug Fixes

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

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8303748	8, 11, 17, 21	WebKit build fails with Visual Studio 2022 17.5.0	CPU,PSU
JDK-8304153	8, 11, 17, 21	Enhance image stability	CPU,PSU
JDK-8308308	8, 11, 17, 21	Update to Visual Studio 2022 version 17.5.0 on Windows	CPU,PSU
JDK-8309508	8, 11, 17, 21	Possible memory leak in JPEG image loader	CPU,PSU
JDK-8310681	8, 11, 17, 21	Update WebKit to 616.1	CPU,PSU
JDK-8313177	8, 11, 17, 21	Web Workers timeout with Webkit 616.1	CPU,PSU
JDK-8313181	8, 11, 17, 21	Enabling modern media controls on webkit 616.1 does not load button images on HTML5 video Element	CPU,PSU
JDK-8313711	8, 11, 17, 21	Cherry-pick WebKit 616.1 stabilization fixes	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8314212	8, 11, 17, 21	Crash when loading cnn.com in WebView	CPU,PSU
JDK-8314520	8, 11, 17, 21	Upgrade Webkit to latest	CPU,PSU
JDK-8315870	8, 11, 17, 21	icu fails to compile with Visual Studio 2022 17.6.5	CPU,PSU
JDK-8088594	17	NullPointerException on showing submenu of a contextmenu	PSU
JDK-8088998	17	XYChart: duplicate child added exception when remove & add a series in several charts	PSU
JDK-8089280	11	horizontal scrollbar should never become visible in TableView with constrained resize policy	PSU
JDK-8090123	17	Items are no longer visible when collection is changed	PSU
JDK-8090647	17	Mnemonics : on windows we should cancel the underscore latch when an app loses focus.	PSU
JDK-8091153	17	Customize the Table Button Menu	PSU
JDK-8091419	17	TableView: invoke table menu button programmatically	PSU
JDK-8137244	17	Empty Tree/TableView with CONSTRAINED_RESIZE_POLICY is not properly resized	PSU
JDK-8138842	11, 17	TableViewSelectionModel.selectIndices does not select index 0	PSU
JDK-8144781	8	Assertion failure in debug build running any JavaFX program on Mac	PSU
JDK-8150709	17	Mac OSX and German Keyboard Layout (Y/Z)	PSU
JDK-8154038	17	Spinner's converter should update its editor	PSU
JDK-8172849	17	Non-intuitive baseline alignment for labeled controls with graphics	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8173321	17	TableView: Click on right trough has no effect when cell height is higher than viewport height	PSU
JDK-8178368	17	Right alignment of text fields and alignment of prompt text works incorrectly	PSU
JDK-8180066	17	Convert package.html files to package-info.java	PSU
JDK-8194704	17	Text/TextFlow hitTest() javadoc	PSU
JDK-8224260	17	ChangeListener not triggered when adding a new listener in invalidated method	PSU
JDK-8230833	17	LabeledSkinBase computes wrong height with ContentDisplay.GRAPHIC_ONLY	PSU
JDK-8231865	17	JFXPanel sends resize event with size 0x0 on HiDPI devices	PSU
JDK-8233955	17	VM crashes if more than one file are added to ClipboardContent via drag and drop	PSU
JDK-8237505	17	RadioMenuItem in ToggleGroup: deselected on accelerator	PSU
JDK-8238650	17	Allow to override buildDate with SOURCE_DATE_EPOCH	PSU
JDK-8242419	17	JFXPanel: MouseEvent always reports that Primary button changed state if held	PSU
JDK-8245919	17	Region#padding property rendering error	PSU
JDK-8246104	17	Some complex text doesn't render correctly on macOS	PSU
JDK-8251862	17	Wrong position of Popup windows at the intersection of 2 screens	PSU
JDK-8260528	17	Clean glass-gtk sizing and positioning code	PSU
JDK-8264449	17	Enable reproducible builds with SOURCE_DATE_EPOCH	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8275033	17	Drag and drop a file produces NullPointerException Cannot read field "dragboard"	PSU
JDK-8278422	17	Replace use of deprecated single string variant of Runtime.exec method	PSU
JDK-8278938	17	[Win] Robot can target wrong key for punctuation and symbols	PSU
JDK-8283063	17	Optimize Observable{List/Set/Map}Wrapper.retainAll/remov eAll	PSU
JDK-8283551	17	ControlAcceleratorSupport menu items listener causes memory leak	PSU
JDK-8285878	17	[TestBug] LocalStorageTest and UserDataDirectoryTest don't always cleanup data dirs	PSU
JDK-8290092	17	Temporary files are kept when call Clipboard.getSystemClipboard().getImage()	PSU
JDK-8290765	17	Remove parent disabled/treeVisible listeners	PSU
JDK-8290866	17	Apple Color Emoji turns gray after JavaFX version 18	PSU
JDK-8293836	11, 17	Rendering performance degradation at bottom of TableView with many rows	PSU
JDK-8295078	17	TextField blurry when inside an TitledPane AnchorPane	PSU
JDK-8296590	17	StraightLineTest fails always on Linux and sometimes on other platforms	PSU
JDK-8296919	17	Make system tests that detect memory leaks more robust by using JMemoryBuddy utility	PSU
JDK-8297071	17	Provide gradle "TEST_ONLY" flag to completely suppress building the sdk and shims	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8297316	17	[TestBug] LocalDateTimeStringConverterTest.testChronology Consistency fails with JDK 20	PSU
JDK-8298382	17	JavaFX ChartArea Accessibility Reader	PSU
JDK-8298528	17	Clean up raw type warnings in base in bindings and collections packages	PSU
JDK-8298728	11	Cells in VirtualFlow jump after resizing	PSU
JDK-8299335	17	Monkey Tester Application	PSU
JDK-8299348	17	Size-restricted window can be observed with incorrect dimensions	PSU
JDK-8299595	17	Remove terminally deprecated JavaFX GTK 2 library	PSU
JDK-8299756	17	Minor updates in CSS Reference	PSU
JDK-8299968	17	Second call to Stage.setScene() create sizing issue with uiScale > 1.0	PSU
JDK-8299986	17	Wrong sublist used in ListChangeListener	PSU
JDK-8301312	17	Create implementation of NSAccessibilityButton protocol	PSU
JDK-8301604	17	Replace Collections.unmodifiableList with List.of	PSU
JDK-8301763	17	Adding children to wrong index leaves inconsistent state in Parent#childrenSet	PSU
JDK-8302355	17	Public API for Toolkit.canStartNestedEventLoop()	PSU
JDK-8302472	17	WebColorFieldSkin should use precompiled Pattern	PSU
JDK-8302511	17	HitInfo.toString() throws IllegalArgumentException	PSU
JDK-8302797	17	ArrayIndexOutOfBoundsException in TextRun.getWrapIndex()	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8302816	17	Refactor sorting-related classes	PSU
JDK-8303680	11, 17	Virtual Flow freezes after calling scrollTo and scrollPixels in succession	PSU
JDK-8303740	17	JavaFX - Leak in Logging, Logging remembers last exception	PSU
JDK-8303897	17	ObservableValue's when binding should only invalidate when strictly needed	PSU
JDK-8303911	17	[testbug] Some unit tests call System.exit	PSU
JDK-8304290	17	Some JNI calls made without checking exceptions in media	PSU
JDK-8304439	17	Subscription based listeners	PSU
JDK-8304705	17	Parent class contains 6 constants that should be static	PSU
JDK-8304831	17	TextFlow.hitTest.insertionIndex incorrect with surrogate pairs	PSU
JDK-8304832	17	[linux] Exception initializing the JavaFX runtime when a security manager is enabled	PSU
JDK-8304922	17	[testbug] SliderTooltipNPETest fails on Linux	PSU
JDK-8304924	17	[testbug] Skip failing tests on Linux	PSU
JDK-8304933	17	BitSet (used for CSS pseudo class states) listener management is incorrect	PSU
JDK-8304959	17	Public API in javafx.css.Match should not return private API class PseudoClassState	PSU
JDK-8304960	17	ObservableListBase should defer constructing ListChangeBuilder	PSU
JDK-8305248	17	TableView not rendered correctly after column is made visible if fixed cell size is set	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8305867	17	BitSetShim: The type parameter T is hiding the type T warning	PSU
JDK-8305885	17	Use ReadOnly*PropertyBase class where possible	PSU
JDK-8306021	17	Add event handler management to EventTarget	PSU
JDK-8306121	17	Scene not rendered initially when changing scenes after fix for JDK-8296621	PSU
JDK-8306328	8, 17	Update libFFI to 3.4.4	PSU
JDK-8306329	11, 17	Update ICU4C to 73.1	PSU
JDK-8306424	17	[testbug] DatePickerUpdateOnAlertCloseTest fails on MacOS	PSU
JDK-8306447	11, 17	Adding an element to a long existing list may cause the first visible element to jump	PSU
JDK-8306464	17	[testbug] CustomSecurityManagerTest full screen tests fails on MacOS intermittently	PSU
JDK-8306571	17	[testbug] Skip Tree/TableViewResizeColumnToFitContentTest with fractional screen scale	PSU
JDK-8306590	17	Add Windows/macOS system files to .gitignore	PSU
JDK-8306648	17	Update the JavaDocs to show the NEW section and DEPRECATED versions	PSU
JDK-8306708	17	Region.layoutInArea uses incorrect snap scale value	PSU
JDK-8306918	8	WebView: Update Public Suffix List to 88467c9	PSU
JDK-8306990	17	The guarantees given by Region's floor and ceiling functions should work for larger values	PSU
JDK-8307076	17	gradle test should always run tests	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8307208	17	Add GridPane constructor that accepts hGap and vGap values	PSU
JDK-8307363	17	TextFlow.underlineShape()	PSU
JDK-8307538	17	Memory leak in TreeTableView when calling refresh	PSU
JDK-8307542	17	Call to FcConfigAppFontAddFile uses wrong prototype, arguments	PSU
JDK-8307807	17	Replace use of System.getProperty("os.name") with PlatformUtil calls	PSU
JDK-8307960	11, 17	Create Table Column PopupMenu lazily	PSU
JDK-8308017	17	[Mac] Update deprecated constants in GlassWindow code	PSU
JDK-8308028	17	Replace more uses of System.getProperty("os.name") with PlatformUtil calls	PSU
JDK-8308114	17	Bump minimum version of macOS for x64 to 11.0 (matching aarch64)	PSU
JDK-8308191	17	[macOS] VoiceOver decorations are shifted on second monitor	PSU
JDK-8308306	8, 11, 17	Update to Xcode 14.3 on macOS	PSU
JDK-8308307	8, 11, 17	Update to gcc 12.2.0 on Linux	PSU
JDK-8309001	17	Allow building JavaFX on Linux/riscv64	PSU
JDK-8309470	11, 17	Potential performance improvements in VirtualFlow	PSU
JDK-8309935	17	Mac - SystemMenuBar, IndexOutOfBoundsException on change	PSU
JDK-8310024	17	Skip failing scene change tests on macOS	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8310638	11, 17	Filtering a TableView with a large number of items freezes the UI	PSU
JDK-8310654	17	validateSourceSets task fails on javafx/scene/package-info.java after JDK-8180066	PSU
JDK-8310667	17	Normalize comment blocks in newly-converted package-info.java files	PSU
JDK-8310846	17	Skip failing test InitialWindowSizeTest on Linux	PSU
JDK-8311097	8, 11, 17, 21	Synchron XMLHttpRequest not receiving data	PSU
JDK-8311127	11, 17	Regression: The fix for TableView and TreeTableView menu button affects all table column headers	PSU
JDK-8311185	11	VirtualFlow jump when cellcount changes	PSU
JDK-8311806	17	Class ButtonAccessibility is implemented twice	PSU
JDK-8312058	17	Documentation improvements for subscription based listeners	PSU
JDK-8312528	17	Move Subscription interface from javafx.beans to javafx.util	PSU
JDK-8313227	17	Correct attenuation indicator for removed lights	PSU
JDK-8313856	17, 21	Replace VLA with malloc in pango	PSU
JDK-8313900	17, 21	Possible NULL pointer access in NativeAudioSpectrum and NativeVideoBuffer	PSU
JDK-8315657	8, 11, 17, 21	Application window not activated in macOS 14 Sonoma	PSU

Bug Fixes Specific to Azul Zulu Builds of OpenJDK

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

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-47189	11	aarch32 can't be compiled in armv7 thumb mode	CPU,PSU
ZULU-52044	6, 7, 8, 11, 17, 21	rpm: fix overlapping install paths	CPU,PSU
ZULU-52045	6, 7, 8, 11, 17, 21	rpm: disable .build-id links generation	CPU,PSU
ZULU-52060	6, 7, 8, 11, 17, 21	rpm, deb: fix overlapping package name for jre and jre-hl	CPU,PSU
ZULU-38486	17	Change to Xcode 12.4 for building zulu	PSU
ZULU-39127	17	Failure in java/net/httpclient/http2/HpackBinaryTestDriver.java - SIGSEGV (0xb) at pc=0x012bbb1e, pid=9702, tid=9717	PSU
ZULU-39745	11	Support custom security providers	PSU
ZULU-48702	17	Change crac java package names	PSU
ZULU-49365	17	Update criu build version	PSU
ZULU-50438	17	Use crac-criu b31	PSU
ZULU-50529	8	Enable build Zulu8 under AIX with XLC 16.1	PSU
ZULU-51813	11	Enable BCFIPS provider configuration	PSU
ZULU-52102	17	[CRaC] Jetty app crashed with "V [libjvm.so+0xc0fa8e] PerfLongVariant::sample()+0x1e" during restore process	PSU
ZULU-52629	8	Update OpenJSSE version to 1.1.14	PSU
ZULU-52630	8, 11, 17	Use CRS Agent 1.0.55	PSU
ZULU-52794	21	Zulu 21 should have LTS suffix	PSU

Bug Fixes Specific to Azul Zulu Builds of OpenJDK with JavaFX

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

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-52487	8, 11, 17, 21	Use VS2022-17.6.5 for WebKit v616.1	CPU,PSU
ZULU-52980	17, 21	win32: webkit build is broken after 8238650	PSU