



Azul Zulu builds of OpenJDK

July 2021 Quarterly Update

Release Notes

Revision 1.3

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Revision History

Revision	Date	Description
0.1	July 20, 2021	Initial version of the document.
1.0	July 20, 2021	Added information about the CVEs fixed in this release.
1.1	July 22, 2021	Provide additional information about dropping support for OpenJSSE and Legacy8uJSSE. Adjust formatting of the CVE table.
1.2	July 23, 2021	In previous versions of the document, some OpenJDK bugs were erroneously marked as CPU bugs instead of PSU bugs. The error is corrected in this version.
1.3	July 26, 2021	Added full versions of Azul Zulu 16 bundles. Updated information about ZULU-26220 in the Azul Zulu Bug Fixes section. Minor changes in the note about dropping support for OpenJSSE and Legacy8uJSSE.

Release Details

This release is a quarterly update release for Azul Zulu Builds of OpenJDK version 16, 15, 13, 11, 8, 7, and 6.

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

Azul Zulu Version*	Update Type**	JDK Version	Based on		JavaFX Version
			Azul Zulu Version	JDK Version	
16.32.15 (CA) 16.32.16 (SA)	PSU	16.0.2+7	16.30	16.0.1+9	16.0.2+102
15.33.12 (SA)	CPU	15.0.3.0.101+1	15.32	15.0.3+3	15.0.3.0.101+100
15.34.17 (CA) 15.34.18 (SA)	PSU	15.0.4+5	15.33	15.0.3.0.101+1	16.0.2+102
13.41.12 (SA)	CPU	13.0.7.0.101+1	13.40	13.0.7+5	15.0.3.0.101+100
13.42.17 (CA) 13.42.18 (SA)	PSU	13.0.8+5	13.41	13.0.7.0.101+1	16.0.2+102
11.49.14 (SA)	CPU	11.0.11.0.101+2	11.48	11.0.11+9	15.0.3.0.101+100
11.50.19 (CA) 11.50.20 (SA)	PSU	11.0.12+7	11.49	11.0.11.0.101+2	16.0.2+102
8.55.0.14 (SA)	CPU	8u301-b02	8.54	8u292-b10	8u301-b01
8.56.0.21/23 (CA) 8.56.0.22/24 (SA)	PSU	8u302-b08	8.55	8u301-b02	8u302-b01
7.47.0.14 (SA)	CPU	7u311-b02	7.46	7u302-b01	N/A
7.48.0.11 (CA) 7.48.0.12 (SA)	PSU	7u312-b01	7.47	7u311-b02	N/A
6.41.0.12 (SA)	CPU	6b141	6.39	6b139	N/A

* Azul provides three types of distribution packages for each Java version:

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

** Update type:

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

Supported Platforms

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

Operating System	Azul Zulu Version						
	6	7	8	11	13	15	16
Windows (x86)							
Windows Server 2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Windows Server 2016	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows Server 2012 R2	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows Client 10	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows Client 8.1	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows (ARM 64-bit)							
Windows 10	n/a	n/a	n/a	n/a	n/a	n/a	Yes
Linux (x86)							
RHEL 8.x	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RHEL 7.x	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RHEL 6.x [1]	n/a	Yes	Yes	Yes	Yes	Yes	Yes
SLES 15	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SLES 12	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CentOS 8.x [2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ubuntu 20.04	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ubuntu 18.04	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Debian 10	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Debian 9	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wind River 9.x	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Wind River 8.x	n/a	Yes	Yes	n/a	n/a	n/a	n/a
CoreOS	n/a	Yes	Yes	Yes	Yes	Yes	Yes
Alpine Linux 3.11 or later	n/a	n/a	Yes	Yes	Yes	Yes	Yes
Linux (ARM 64-bit)							
Ubuntu 20.04	n/a	n/a	n/a	n/a	Yes	Yes	Yes
Alpine Linux 3.11 or later	n/a	n/a	n/a	n/a	n/a	n/a	Yes
Linux (ARM 32-bit Hard-Float)							
Ubuntu 18.04 [3]	n/a	n/a	Yes	Yes	n/a	n/a	n/a

Raspbian 10 Buster [3]	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Raspbian 9 Stretch [3]	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Linux (ARM 32-bit Soft-Float)							
Linux with kernel 2.6.34 and GLIBC 2.5 [4]	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Debian 7 Wheezy [5]	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Linux (MIPS 32-bit)							
Linux	n/a	n/a	Yes	n/a	n/a	n/a	n/a
Linux (PowerPC 64-bit Big Endian)							
Linux with kernel 3.8.13 and GLIBC 2.22	n/a	n/a	Yes	n/a	n/a	n/a	n/a
Linux (PowerPC 32-bit Hard-float and SPE)							
Linux with kernel 3.12.37 and GLIBC 2.20	n/a	n/a	Yes	n/a	n/a	n/a	n/a
QNX (ARMv7 32-bit Hard-Float ABI)							
QNX 7.0	n/a	n/a	Yes	n/a	n/a	n/a	n/a
MacOS (x86)							
macOS 11	n/a	Yes	Yes	Yes	Yes	Yes	Yes
macOS 10.15	n/a	Yes	Yes	Yes	Yes	Yes	Yes
macOS 10.14	n/a	Yes	Yes	Yes	Yes	Yes	Yes
MacOS (Apple Silicon)							
macOS 11	n/a	n/a	Yes	Yes	Yes	Yes	Yes
Solaris (x86 and Sparc)							
Solaris 11	Yes	Yes	Yes	Yes	n/a	n/a	n/a
Solaris 10	Yes	Yes	Yes	n/a	n/a	n/a	n/a

1. Azul Zulu builds for RHEL 6 are discontinued in January 2022.
2. The Azul Zulu builds for CentOS 8 are discontinued on December 31, 2021 due to Red

That terminating CentOS development and shifting focus to CentOS Stream.

3. Bundles with the C1 compiler were tested on ARMv6/ARMv7/ARMv8 hardware.

Bundles with both C1 and C2 compilers were tested on ARMv7/ARMv8 hardware.

4. Bundles with the C1 compiler. Tested on ARMv5 hardware.

5. Bundles with the C1 compiler were tested on ARMv6 and ARMv7 hardware. Bundles with both C1 and C2 compilers were tested on ARMv7 hardware.

What's New

Azul Zulu 8 for Windows is built with Microsoft Visual Studio 2017

Azul Zulu 8 builds for Windows are now compiled with Microsoft Visual Studio 2017.

OpenJDK version is used in string resources in Windows executables of Azul Zulu

The string resources embedded in the Windows executable files now contain the OpenJDK version instead of the Azul Zulu version. This includes strings like

`FileVersion` and `Full Version`.

Azul APT and RPM repositories now have packages for Arm 64 devices

Starting with this release, you can install Azul Zulu 15 and 16 on Arm64 devices from the APT and RPM repositories. Follow the instructions provided in the `install-from-azul-apt-repository` and `install-from-azul-rpm-repository` sections.

Third Party Licenses documents now combine licenses for CPU and PSU bundles

Starting with this release, Azul provides third party licenses for CPU and PSU bundles in a single document, which contains the superset of the licenses.

Notice of Upcoming Changes

- Azul Zulu 8 is dropping support for OpenJSSE and Legacy8uJSSE in January 2022.

[OpenJSSE](#) is a JSSE provider that was ported from Java 11 to Azul Zulu 8 to add support for TLS 1.3, because OpenJDK 8 did not support TLS 1.3 at the time.

[Legacy8uJSSE](#) is a JSSE provider that falls back to legacy TLS 1.2 protocol implementation. It was added to Azul Zulu 8 for compatibility reasons.

Later, OpenJSSE was integrated into the SunJSSE provider of OpenJDK 8u272 and became part of Java SE 8 specification.

Both OpenJSSE and Legacy8uJSSE are no longer needed and will be removed from Azul Zulu 8.

- **Support for RHEL 6 will be discontinued in January 2022.**

Known Issues

- When using Azul Zulu 11, you may get the following exception when an application is trying to establish a TLS connection with the ALPN extension enabled under a security manager.

```
Exception: access denied ("java.security.SecurityPermission"  
"getProperty.jdk.tls.alpnCharset")
```

This happens because the 'org.openjsse' provider in Azul Zulu 11 does not have permissions to read the `getProperty.jdk.tls.alpnCharset` property.

As a workaround, grant the following permission in the

`<zulu_dir>/lib/security/default.policy` file:

```
grant codeBase "jrt:/org.openjsse" {  
    // other permissions  
  
    permission java.security.SecurityPermission  
    "getProperty.jdk.tls.alpnCharset";  
}
```

- The Foreign Linker API (Incubator) that appeared as part of [JEP-389](#) has a number of issues when used on Apple Silicon devices with Azul Zulu 16. The issues will be fixed in a future Azul Zulu 16 release.

IANA Time Zone Data Version

This release does not contain any changes to the time zone data.

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-2021-2388	Hotspot	Multiple	Yes	7.5	Network	High	None	Required	Unchanged	High	High	High	16, 15, 13, 11, 8	Note 1
CVE-2021-2369	Library	Multiple	Yes	4.3	Network	Low	None	Required	Unchanged	None	Low	None	16, 15, 13, 11, 8, 7, 6	Note 1
CVE-2021-2432	JNDI	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	None	Low	7, 6	Note 2
CVE-2021-2341	Networking	Multiple	Yes	3.1	Network	High	None	Required	Unchanged	Low	None	None	16, 15, 13, 11, 8, 7, 6	Note 1
CVE-2021-29921	Oracle GraalVM Enterprise Edition: Python interpreter and runtime (CPython)	Multiple	Yes	9.8	Network	Low	None	None	Unchanged	High	High	High	None	
CVE-2020-28928	Oracle GraalVM Enterprise Edition: LLVM Interpreter (musl libc)	None	No	5.5	Local	Low	Low	None	Unchanged	None	None	High	None	

Notes:

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

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-8264460	16, 15, 13, 11, 8, 7	Improve NTLM support	CPU
JDK-8264079	16, 15, 13, 11, 8, 7, 6	Improve abstractions	CPU
JDK-8263111	16, 15, 8	Enhance String Conclusions	CPU
JDK-8262975	16, 15, 8	Upgrade Glib support	CPU
JDK-8262967	16, 15, 13, 11, 8, 7, 6	Improve Zip file support	CPU
JDK-8262477	16, 15, 13, 11, 8, 7, 6	Enhance String Conclusions	CPU
JDK-8262410	16, 15, 13, 11, 8	Enhanced rules for zones	CPU
JDK-8262403	16, 15, 13, 11, 8, 7, 6	Enhanced data transfers	CPU
JDK-8262380	16, 15, 13, 11, 8, 7, 6	Enhance XML processing passes	CPU
JDK-8260960	16, 15, 13, 11, 8, 7, 6	Signs of jarsigner signing	CPU
JDK-8260453	16, 15, 13, 11, 8, 7, 6	Improve Font Bounding	CPU
JDK-8256491	16, 15, 13, 11, 8, 7, 6	Better HTTP transport	CPU
JDK-8256157	16, 15, 13, 11, 8, 7, 6	Improve bytecode assembly	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8160768	7, 6	Add capability to custom resolve host/domain names within the default JNDI LDAP provider	CPU

OpenJDK Bug Fixes

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

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8267412	7, 6	Provide better LDAP provider support	CPU
JDK-8264460	16, 15, 13, 11, 8, 7	Improve NTLM support	CPU
JDK-8264079	16, 15, 13, 11, 8, 7, 6	Improve abstractions	CPU
JDK-8264066	16, 15, 13, 11, 8	Enhance compiler validation	CPU
JDK-8262967	16, 15, 13, 11, 8, 7, 6	Improve Zip file support	CPU
JDK-8262477	16, 15, 13, 11, 8, 7, 6	Enhance String Conclusions	CPU
JDK-8262410	16, 15, 13, 11, 8	Enhanced rules for zones	CPU
JDK-8262403	16, 15, 13, 11, 8, 7, 6	Enhanced data transfers	CPU
JDK-8262380	16, 15, 13, 11, 8, 7, 6	Enhance XML processing passes	CPU
JDK-8260967	16, 15, 13, 11, 8, 7, 6	Better jar file validation	CPU
JDK-8260960	16, 15, 13, 11, 8, 7, 6	Signs of jarsigner signing	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8260453	16, 15, 13, 11, 8, 7, 6	Improve Font Bounding	CPU
JDK-8258432	16, 15, 13, 11, 8, 7, 6	Improve file transfers	CPU
JDK-8256491	16, 15, 13, 11, 8, 7, 6	Better HTTP transport	CPU
JDK-8256157	16, 15, 13, 11, 8, 7, 6	Improve bytecode assembly	CPU
JDK-8253299	15	Manifest bytes are read twice when verifying a signed JAR	CPU
JDK-8242565	8	Policy initialization issues when the denyAfter constraint is enabled	CPU
JDK-8241248	16, 15, 13, 11, 8	NullPointerException in sun.security.ssl.HKDF.extract(HKDF.java:93)	CPU
JDK-8173622	6	Backport of 7180907 is incomplete	CPU
JDK-8160768	7, 6	Add capability to custom resolve host/domain names within the default JNDI LDAP provider	CPU
JDK-8151678	7, 6	com/sun/jndi/ldap/LdapTimeoutTest.java failed due to timeout on DeadServerNoTimeoutTest is incorrect	CPU
JDK-8141422	8	G1 eager reclaim card dirtying may dirty outside of allocated objects	CPU
JDK-8069034	8	gc/g1/TestEagerReclaimHumongousRegionsClearMarkBits.java nightly failure	CPU
JDK-8035134	8	JDK9 unix debug bundle manifest file list issue	CPU
JDK-7148499	6	Stack size in tools/launcher/Settings.java needs to be increased	CPU
JDK-7123582	6	(launcher) display the -version and -XshowSettings	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-6887494	6	NPE in pisces Renderer	CPU
JDK-8270533	8	AArch64: size_fits_all_mem_uses should return false if its output is a CAS	PSU
JDK-8269468	8	JDK-8269388 breaks the build on older GCCs	PSU
JDK-8269388	8	default build of jdk8 fails on newer GCCs with warnings as errors on format-overflow	PSU
JDK-8268678	11	LetsEncryptCA.java test fails as Let's Encrypt Authority X3 is retired	PSU
JDK-8268444	8	keytool -v -list print is incorrect after backport JDK-8141457	PSU
JDK-8268173	16	Wrong GA date in JDK 11.0.12 and 16.0.2 versions	PSU
JDK-8267842	16	SIGSEGV in get_current_contented_monitor	PSU
JDK-8267773	16	PhaseStringOpts::int_stringSize doesn't handle min_jint correctly	PSU
JDK-8267721	11	Enable sun/security/pkcs11 tests for Amazon Linux 2 AArch64	PSU
JDK-8267689	8	[8u] [aarch64] Crash due to bad shift in indirect addressing mode	PSU
JDK-8267641	11	[11u] 8227609 backport typo	PSU
JDK-8267599	11	Revert the change to the default PKCS12 macAlgorithm and macIterationCount props for 11u/8u/7u	PSU
JDK-8267561	11	Shenandoah: Reference processing not properly setup for outside of cycle degenerated GC	PSU
JDK-8267545	8	[8u] Enable Xcode 12 builds on macOS	PSU
JDK-8267426	8	MonitorVmStartTerminate test timed out on Embedded VM	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8267345	16	VM crashes during dumping classlist with -Xshare:dump option	PSU
JDK-8267235	15, 13, 11, 8	[macos_aarch64] InterpreterRuntime::throw_pending_exception messing up LR results in crash	PSU
JDK-8267117	16	sun/hotspot/whitebox/CPUInfoTest.java fails on Ice Lake	PSU
JDK-8267100	16	[BACKOUT] JDK-8196415 Disable SHA-1 Signed JARs	PSU
JDK-8266929	11, 8	Unable to use algorithms from 3p providers	PSU
JDK-8266892	11	avoid maybe-uninitialized gcc warnings on linux s390x	PSU
JDK-8266802	16, 11	Shenandoah: Round up region size to page size unconditionally	PSU
JDK-8266723	8	JFR periodic events are causing extra allocations	PSU
JDK-8266713	11	[AIX] Build failure after 11u backport of JDK-8247753	PSU
JDK-8266293	11	Key protection using PBEWithMD5AndDES fails with "java.security.InvalidAlgorithmParameterException: Salt must be 8 bytes long"	PSU
JDK-8266288	16	assert root method not found in witnessed_reabstraction_in_supers is too strong	PSU
JDK-8266220	11	keytool still prompt for store password on a password-less pkcs12 file if -storetype pkcs12 is specified	PSU
JDK-8266191	8	Missing aarch64 parts of JDK-8181872(C1: possible overflow when strength reducing integer multiply by constant)	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8265988	8	Fix sun/text/IntHashtable/Bug4170614 for JDK 8u	PSU
JDK-8265938	11	C2's conditional move optimization does not handle top Phi	PSU
JDK-8265860	15	Update version .jcheck/conf in jdk15u to be 15.0.4	PSU
JDK-8265837	13	Update version .jcheck/conf in jdk13u to be 13.0.8	PSU
JDK-8265832	8	runtime/StackGap/testme.sh fails to compile in 8u	PSU
JDK-8265784	11	[C2] Hoisting of DecodeN leaves MachTemp inputs behind	PSU
JDK-8265750	11	Fatal error in safepoint.cpp after backport of 8258414	PSU
JDK-8265718	11	Build failure after JDK-8258414 11u backport	PSU
JDK-8265690	11	Use the latest Ubuntu base image version in Docker testing	PSU
JDK-8265677	11	CMS: CardTableBarrierSet::write_ref_array_work() lacks storestore barrier	PSU
JDK-8265666	16, 11, 8	Enable AIX build platform to make external debug symbols	PSU
JDK-8265537	11	x86 version string truncated after JDK-8249672 11u backport	PSU
JDK-8265531	16	doc/building.md should mention homebrew install freetype	PSU
JDK-8265462	11, 8	Handle multiple slots in the NSS Internal Module from SunPKCS11's Secmod	PSU
JDK-8265421	11	java/lang/String/StringRepeat.java test is missing a memory requirement	PSU
JDK-8265417	11	Backport of JDK-8249672 breaks Solaris x86 build	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8265239	16, 11	Shenandoah: Shenandoah heap region count could be off by 1	PSU
JDK-8265204	16	Update the milestone for JDK16.0.2	PSU
JDK-8265201	16	JarFile.getInputStream not validating invalid signed jars	PSU
JDK-8265154	11	vinserti128 operand mix up for KNL platforms	PSU
JDK-8265099	11	Revert backport to 11u of 8236859: WebSocket over authenticating proxy fails with NPE	PSU
JDK-8264958	11	C2 compilation fails with assert "n is later than its clone"	PSU
JDK-8264923	11	PNGImageWriter.write_zTXt throws Exception with a typo	PSU
JDK-8264846	11	Regression ~5% in J2dBench.bimg_misc on Linux after JDK-8263142	PSU
JDK-8264823	15	Update building.html document for Git in jdk15u	PSU
JDK-8264821	15, 13, 11	DirectIOtest fails on a system with large block size	PSU
JDK-8264816	8	Weak handles leak causes GC to take longer	PSU
JDK-8264786	16, 15, 13, 11	[macOS] All Swing/AWT apps cause Allow Notifications prompt to appear when app is launched	PSU
JDK-8264640	13, 11, 8	CMS ParScanClosure misses a barrier	PSU
JDK-8264626	11	C1 should be able to inline excluded methods	PSU
JDK-8264562	8	assert(verify_field_bit(1)) failed: Attempting to write an uninitialized event field: type	PSU
JDK-8264509	8	jdk8u MacOS zipped debug symbols won't build	PSU
JDK-8264374	16	Shenandoah: Remove leftover parallel reference processing argument	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8264360	11	Loop strip mining verification fails with "should be on the backedge"	PSU
JDK-8264328	11	Broken license in javax/swing/JComboBox/8072767/bug8072767.java	PSU
JDK-8264256	15	Update version .jcheck/conf in jdk15u-dev to be 15.0.4	PSU
JDK-8264255	15	Bump update version for OpenJDK: jdk-15.0.4	PSU
JDK-8264223	11	CodeHeap::verify fails extra_hops assertion in fastdebug test	PSU
JDK-8264190	11	Harden TLS interop tests	PSU
JDK-8264173	11	[s390] Improve Hardware Feature Detection And Reporting	PSU
JDK-8264151	11	ciMethod::ensure_method_data() should return false is loading resulted in empty state	PSU
JDK-8264108	13	Update version .jcheck/conf in jdk13u-dev to be 13.0.8	PSU
JDK-8264107	13	Bump update version for OpenJDK: jdk-13.0.8	PSU
JDK-8264096	11	slowdebug jvm crashes when StrInflatedCopy match rule is not supported	PSU
JDK-8264047	16, 11	Duplicate global variable 'jvm' in libjavajpeg and libawt	PSU
JDK-8263846	15, 13, 11	Bad JNI lookup getFocusOwner in accessibility code on Mac OS X	PSU
JDK-8263676	13, 11	AArch64: one potential bug in C1 LIRGenerator::generate_address()	PSU
JDK-8263587	16	C2: JVMMS not cloned when needs_clone_jvms() is true	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8263564	16	Consolidate POSIX code for runtime exit support: os::shutdown, os::abort and os::die	PSU
JDK-8263558	16, 11	Possible NULL dereference in fast path arena free if ZapResourceArea is true	PSU
JDK-8263557	16, 11	Possible NULL dereference in Arena::destruct_contents()	PSU
JDK-8263504	11, 8	Some OutputMachOpcodes fields are uninitialized	PSU
JDK-8263448	11	CTW: fatal error: meet not symmetric	PSU
JDK-8263430	16	Uninitialized Method* variables after JDK-8233913	PSU
JDK-8263425	11	AArch64: two potential bugs in C1 LIRGenerator::generate_address()	PSU
JDK-8263404	11	RsaPrivateKeySpec is always recognized as RSAPrivateCrtKeySpec in RSAKeyFactory.engineGetKeySpec	PSU
JDK-8263361	15, 11	Incorrect arraycopy stub selected by C2 for SATB collectors	PSU
JDK-8263311	16, 11	Watch registry changes for remote printers update instead of polling	PSU
JDK-8263260	11	[s390] Support latest hardware (z14 and z15)	PSU
JDK-8263136	16	C4530 was reported from VS 2019 at access bridge	PSU
JDK-8263069	16	Exclude some failing tests from security/infra/java/security/cert/CertPathValidator	PSU
JDK-8263061	8	copy wrong unpack200.diz to bin directory on linux after 8252395	PSU
JDK-8263030	16	Remove Shenandoah leftovers from ReferenceProcessor	PSU
JDK-8262900	11	ToolBasicTest fails to access HTTP server it starts	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8262899	16	TestRedirectLinks fails	PSU
JDK-8262864	8	No debug symbols in image for Windows --with-native-debug-symbols=external	PSU
JDK-8262844	16	(fs) FileStore.supportsFileAttributeView might return false negative in case of ext3	PSU
JDK-8262837	11	handle split_USE correctly	PSU
JDK-8262829	16, 15, 13, 11	Native crash in Win32PrintServiceLookup.getAllPrinterNames()	PSU
JDK-8262739	11	String inflation C2 intrinsic prevents insertion of anti-dependencies	PSU
JDK-8262730	8	Enable jdk8u MacOS external debug symbols	PSU
JDK-8262726	11, 8	AArch64: C1 StubAssembler::call_RT can corrupt stack	PSU
JDK-8262465	11	Very long compilation times and high memory consumption in C2 debug builds	PSU
JDK-8262461	11	handle wcstombsdmp return value correctly in unix awt_InputMethod.c	PSU
JDK-8262446	16, 15, 11, 8	DragAndDrop hangs on Windows	PSU
JDK-8262298	11	G1BarrierSetC2::step_over_gc_barrier fails with assert "bad barrier shape"	PSU
JDK-8262295	16, 11	C2: Out-of-Bounds Array Load from Clone Source	PSU
JDK-8262163	11	Extend settings printout in jcmd VM.metaspace	PSU
JDK-8262121	11	[11u] Redo 8244287: JFR: Methods samples have line number 0	PSU
JDK-8262110	16, 15, 13, 11, 8	DST starts from incorrect time in 2038	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8262093	11	java/util/concurrent/tck/JSR166TestCase.java failed "assert(false) failed: unexpected node"	PSU
JDK-8261916	16	gtest/GTestWrapper.java vmErrorTest.unimplemented1_vm_assert failed	PSU
JDK-8261914	16, 11	IfNode::fold_compares_helper faces non-canonicalized bool when running JRuby JSON workload	PSU
JDK-8261867	8	Backport relevant test changes & additions from JDK-8130125	PSU
JDK-8261812	11	C2 compilation fails with assert(!had_error) failed: bad dominance	PSU
JDK-8261791	11	(sctp) handleSendFailed in SctpChannelImpl.c potential leaks	PSU
JDK-8261752	11	Multiple GC test are missing memory requirements	PSU
JDK-8261730	11	C2 compilation fails with assert(store.find_edge(load) != -1) failed: missing precedence edge	PSU
JDK-8261649	11	AArch64: Optimize LSE atomics in C++ code	PSU
JDK-8261601	11	(sctp) free memory in early return in Java_sun_nio_ch_sctp_SctpChannelImpl_receive0	PSU
JDK-8261585	13	Restore HandleArea used in Deoptimization::uncommon_trap	PSU
JDK-8261505	16, 11	Test test/hotspot/jtreg/gc/parallel/TestDynShrinkHeap. java killed by Linux OOM Killer	PSU
JDK-8261481	11	Cannot read Kerberos settings in dynamic store on macOS Big Sur	PSU
JDK-8261447	11	MethodInvocationCounters frequently run into overflow	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8261422	11	Adjust problematic String.format calls in jdk/internal/util/Preconditions.java outOfBoundsMessage	PSU
JDK-8261397	15, 13	try catch Method failing to work when dividing an integer by 0	PSU
JDK-8261395	15	C1 crash "cannot make java calls from the native compiler"	PSU
JDK-8261355	16, 11, 8	No data buffering in SunPKCS11 Cipher encryption when the underlying mechanism has no padding	PSU
JDK-8261354	16, 11	SIGSEGV at MethodIteratorHost	PSU
JDK-8261262	16, 11	Kitchensink24HStress.java crashed with EXCEPTION_ACCESS_VIOLATION	PSU
JDK-8261261	11	The version extra fields needs to be overridable in jib-profiles.js	PSU
JDK-8261235	11	C1 compilation fails with assert(res≠vreg_number() == index) failed: conversion check	PSU
JDK-8261231	15	Windows IME was disabled after DnD operation	PSU
JDK-8261198	15, 13, 11	[macOS] Incorrect JNI parameters in number conversion in A11Y code	PSU
JDK-8261183	8	Follow on to Make lists of normal filenames	PSU
JDK-8261170	15, 13, 11	Upgrade to FreeType 2.10.4	PSU
JDK-8261167	11	print_process_memory_info add a close call after fopen	PSU
JDK-8261027	11	AArch64: Support for LSE atomics C++ HotSpot code	PSU
JDK-8261022	15	Fix incorrect result of Math.abs() with char type	PSU
JDK-8261020	11	Wrong format parameter in create_emergency_chunk_path	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8260926	11	Trace resource exhausted events unconditionally	PSU
JDK-8260925	11	URLConnection does not work with other JSSE provider.	PSU
JDK-8260707	11	java/lang/instrument/PremainClass/InheritAgent0100.java times out	PSU
JDK-8260704	8	ParallelGC: oldgen expansion needs release-store for _end	PSU
JDK-8260653	11	Unreachable nodes keep speculative types alive	PSU
JDK-8260616	15, 13, 11	Removing remaining JNF dependencies in the java.desktop module	PSU
JDK-8260484	8	CheckExamples.java / NoJavaLangTest.java fail with jtreg 4.2	PSU
JDK-8260432	11	allocateSpaceForGP in freetypeScaler.c might leak memory	PSU
JDK-8260426	11	awt debug_mem.c DMem_AllocateBlock might leak memory	PSU
JDK-8260420	11	C2 compilation fails with assert(found_sfpt) failed: no node in loop that's not input to safepoint	PSU
JDK-8260401	16	StackOverflowError on open WindowsPreferences	PSU
JDK-8260380	15, 13, 11	Upgrade to LittleCMS 2.12	PSU
JDK-8260356	8	(tz) Upgrade time-zone data to tzdata2021a	PSU
JDK-8260349	15	Cannot programmatically retrieve Metaspace max set via JAVA_TOOL_OPTIONS	PSU
JDK-8260308	16	Update LogCompilation junit to 4.13.1	PSU
JDK-8260284	11	C2: assert(_base == Int) failed: Not an Int	PSU
JDK-8260255	11, 8	C1: LoopInvariantCodeMotion constructor can leave some fields uninitialized	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8260236	16, 11, 8	better init AnnotationCollector _contended_group	PSU
JDK-8260204	16	Update the release version and release date after forking April CPU21_04	PSU
JDK-8260030	11	Improve stringStream buffer handling	PSU
JDK-8260029	8	aarch64: fix typo in verify_oop_array	PSU
JDK-8259983	11	do not use uninitialized expand_ms value in G1CollectedHeap::expand_heap_after_young_collection	PSU
JDK-8259886	11, 8	Improve SSL session cache performance and scalability	PSU
JDK-8259869	15, 13, 11	[macOS] Remove desktop module dependencies on JNF Reference APIs	PSU
JDK-8259843	11	initialize dli_fname array before calling dll_address_to_library_name	PSU
JDK-8259786	11	initialize last parameter of getpwuid_r	PSU
JDK-8259777	11	Incorrect predication condition generated by ADLC	PSU
JDK-8259729	11	Missed JNFInstanceOf ↔ IsInstanceOf conversion	PSU
JDK-8259710	11	Inlining trace leaks memory	PSU
JDK-8259662	16, 11	Don't wrap SocketExceptions into SSLEExceptions in SSLSocketImpl	PSU
JDK-8259651	15, 13, 11	[macOS] Replace JNF_COCOA_ENTER/EXIT macros	PSU
JDK-8259627	16	Potential memory leaks in JVMTI after JDK-8227745	PSU
JDK-8259619	8	C1: 3-arg StubAssembler::call_RT stack-use condition is incorrect	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8259585	15, 13, 11	[macOS] Bad JNI lookup error : Accessible actions do not work on macOS	PSU
JDK-8259428	8	AlgorithmId.getEncodedParams() should return copy	PSU
JDK-8259343	15, 13, 11	[macOS] Update JNI error handling in Cocoa code.	PSU
JDK-8259319	15	Illegal package access when SunPKCS11 requires SunJCE's classes	PSU
JDK-8259312	15, 13	VerifyCACerts.java fails as soneraclass2ca cert will expire in 90 days	PSU
JDK-8259276	11	C2: Empty expression stack when reexecuting tableswitch/lookupswitch instructions after deoptimization	PSU
JDK-8259271	8	gc/parallel/TestDynShrinkHeap.java still fails "assert(covered_region.contains(new_memregion)) failed: new region is not in covered_region"	PSU
JDK-8259232	15, 13, 11	Bad JNI lookup during printing	PSU
JDK-8259227	11	C2 crashes with SIGFPE due to a division that floats above its zero check	PSU
JDK-8259061	11	C2: assert(found) failed: memory-writing node is not placed in its original loop or an ancestor of it	PSU
JDK-8259048	8	(tz) Upgrade time-zone data to tzdata2020f	PSU
JDK-8258753	16, 11, 8	StartTlsResponse.close() hangs due to synchronization issues	PSU
JDK-8258669	8	fastdebug jvm crashes when do event based tracing for monitor inflation	PSU
JDK-8258505	11	[TESTBUG] TestDivZeroWithSplitIf.java fails due to missing UnlockDiagnosticVMOptions	PSU
JDK-8258419	8	RSA cipher buffer cleanup	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8258414	16, 15, 11	OldObjectSample events too expensive	PSU
JDK-8258396	15	SIGILL in jdk.jfr.internal.PlatformRecorder.rotateDisk()	PSU
JDK-8258247	8	Couple of issues in fix for JDK-8249906	PSU
JDK-8257999	8	Parallel GC crash in gc/parallel/TestDynShrinkHeap.java: new region is not in covered_region	PSU
JDK-8257997	8	sun/security/ssl/SSLSocketImpl/SSLSocketLeak.java again reports leaks after JDK-8257884	PSU
JDK-8257988	15, 13, 11	Remove JNF dependency from libsaproc/MacosxDebuggerLocal.m	PSU
JDK-8257884	8	Re-enable sun/security/ssl/SSLSocketImpl/SSLSocketLeak.java as automatic test	PSU
JDK-8257860	15, 13, 11	[macOS]: Remove JNF dependency from libosxkrb5/SCDynamicStoreConfig.m	PSU
JDK-8257858	15, 13, 11	[macOS]: Remove JNF dependency from libosxsecurity/KeystoreImpl.m	PSU
JDK-8257853	15, 13, 11	Remove dependencies on JNF's JNI utility functions in AWT and 2D code	PSU
JDK-8257828	11	SafeFetch may crash if invoked in non-JavaThreads	PSU
JDK-8257822	11	C2 crashes with SIGFPE due to a division that floats above its zero check	PSU
JDK-8257796	11	[TESTBUG] TestUseSHA512IntrinsicsOptionOnSupportedCPU.java fails on x86_32	PSU
JDK-8257746	15	Regression introduced with JDK-8250984 - memory might be null in some machines	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8257707	15	Fix incorrect format string in Http1HeaderParser	PSU
JDK-8257670	8	sun/security/ssl/SSLSocketImpl/SSLSocketLeak.java reports leaks	PSU
JDK-8257621	15, 11	JFR StringPool misses cached items across consecutive recordings	PSU
JDK-8257604	11	JNI_ArgumentPusherVaArg leaks valist	PSU
JDK-8257580	11	Bump update version for OpenJDK: jdk-11.0.12	PSU
JDK-8257574	11	C2: "failed: parsing found no loops but there are some" assert failure	PSU
JDK-8257569	11	Failure observed with JfrVirtualMemory::initialize	PSU
JDK-8257547	15	Handle multiple prereqs on the same line in deps files	PSU
JDK-8257414	15	Drag n Drop target area is wrong on high DPI systems	PSU
JDK-8257242	15	[macOS] Java app crashes while switching input methods	PSU
JDK-8257039	8	[8u] GenericTaskQueue destructor is incorrect	PSU
JDK-8256818	8	SSLSocket that is never bound or connected leaks socket resources	PSU
JDK-8256810	15	Incremental rebuild broken on Macosx	PSU
JDK-8256809	15	Annotation processing causes NPE during flow analysis	PSU
JDK-8256751	15	Incremental rebuild with precompiled header fails when touching a header file	PSU
JDK-8256682	13	JDK-8202343 is incomplete	PSU
JDK-8256633	15, 13	Fix product build on Windows+Arm64	PSU
JDK-8256523	11	Streamline Java SHA2 implementation	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8256501	15, 13	libTestMainKeyWindow fails to build with Xcode 12.2	PSU
JDK-8256421	15, 13	Add 2 HARICA roots to cacerts truststore	PSU
JDK-8256359	13	AArch64: runtime/ReservedStack/ReservedStackTestCompiler.java fails	PSU
JDK-8256287	11	[windows] add loop fuse to map_or_reserve_memory_aligned	PSU
JDK-8256244	11	java/lang/ProcessHandle/PermissionTest.java fails with TestNG 7.1	PSU
JDK-8256037	11	[TESTBUG] com/sun/jndi/dns/ConfigTests/PortUnreachable.java fails due to the hard coded threshold is small	PSU
JDK-8255992	15, 11	JFR EventWriter does not use first string from StringPool with id 0	PSU
JDK-8255908	15	ExceptionInInitializerError due to UncheckedIOException while initializing cgroupv1 subsystem	PSU
JDK-8255880	15, 13	UI of Swing components is not redrawn after their internal state changed	PSU
JDK-8255845	15, 13	Memory leak in imageFile.cpp	PSU
JDK-8255763	11	C2: OSR miscompilation caused by invalid memory instruction placement	PSU
JDK-8255734	8	VM should ignore SIGXFSZ on ppc64, s390 too	PSU
JDK-8255716	15, 13, 11, 8	AArch64: Regression: JVM crashes if manually offline a core	PSU
JDK-8255625	11	AArch64: Implement Base64.encodeBlock accelerator/intrinsic	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8255086	15, 11, 8	Update the root locale display names	PSU
JDK-8254790	13	SIGSEGV in string_indexof_char and stringL_indexof_char intrinsics	PSU
JDK-8254717	11	isAssignableFrom checks in KeyFactorySpi.engineGetKeySpec appear to be backwards	PSU
JDK-8254631	11, 8	Better support ALPN byte wire values in SunJSSE	PSU
JDK-8253948	11	Memory leak in ImageFileReader	PSU
JDK-8253923	11	C2 doesn't always run loop opts for compilations that include loops	PSU
JDK-8253799	8	Make lists of normal filenames	PSU
JDK-8253572	11	[windows] CDS archive may fail to open with long file names	PSU
JDK-8253476	15	TestUseContainerSupport.java fails on some Linux kernels w/o swap limit capabilities	PSU
JDK-8253167	11	ARM32 builds fail after JDK-8247910	PSU
JDK-8252883	15, 13, 11, 8	AccessDeniedException caused by delayed file deletion on Windows	PSU
JDK-8252779	11	compiler/graalunit/HotspotTest.java failed after JDK-8251525	PSU
JDK-8252311	11	AArch64: save two words in itable lookup stub	PSU
JDK-8252259	11	AArch64: Adjust default value of FLOATPRESSURE	PSU
JDK-8252090	15	JFR: StreamWriterHost::write_unbuffered() stucks in an infinite loop OpenJDK (build 13.0.1+9)	PSU
JDK-8251549	15, 13	Update docs on building for Git	PSU
JDK-8251525	11	AArch64: Faster Math.signum(fp)	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8251456	15, 13	[TESTBUG] compiler/vectorization/TestVectorsNotSavedAtSafepoint.java failed OutOfMemoryError	PSU
JDK-8251257	15	NMT: jcmd VM.native_memory scale=1 crashes target VM	PSU
JDK-8251031	11	Some vmTestbase/nsk/monitoring/RuntimeMXBean tests fail with hostnames starting from digits	PSU
JDK-8250984	15	Memory Docker tests fail on some Linux kernels w/o cgroupv1 swap limit capabilities	PSU
JDK-8250635	11	MethodArityHistogram should use Compile_lock in favour of fancy checks	PSU
JDK-8250627	15	Use -XX:+/-UseContainerSupport for enabling/disabling Java container metrics	PSU
JDK-8250568	8	Less ambiguous processing	PSU
JDK-8249906	8	Enhance opening JARs	PSU
JDK-8249875	11	GCC 10 warnings -Wtype-limits with JFR code	PSU
JDK-8249719	11	MethodHandle performance suffers from bad ResolvedMethodTable hash function	PSU
JDK-8249608	15, 13	Vector register used by C2 compiled method corrupted at safepoint	PSU
JDK-8249215	15	JFrame::setVisible crashed with -Dfile.encoding=UTF-8 on Japanese Windows.	PSU
JDK-8249189	11	AArch64: more L2I conversions can be skipped	PSU
JDK-8249142	11, 8	java/awt/FontClass/CreateFont/DeleteFont.sh is unstable	PSU
JDK-8248870	11	AArch64: I2L/L2I conversions can be skipped for masked positive values	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8248568	11	compiler/c2/TestBit.java failed "RuntimeException: 'test' missing from stdout/stderr"	PSU
JDK-8248552	15, 13	C2 crashes with SIGFPE due to division by zero	PSU
JDK-8248532	15	Every time I change keyboard language at my MacBook, Java crashes	PSU
JDK-8248411	11	AArch64: Insufficient error handling when CodeBuffer is exhausted	PSU
JDK-8248043	13, 11	Need to eliminate excessive i2l conversions	PSU
JDK-8247763	13	assert(outer->outcnt() == 2) failed: 'only phis' failure in LoopNode::verify_strip_mined()	PSU
JDK-8247753	15, 13, 11	UIManager.getSystemLookAndFeelClassName() returns wrong value on Fedora 32	PSU
JDK-8247502	13	PhaseStringOpts crashes while optimising effectively dead code	PSU
JDK-8247438	11	JShell: When FailOverExecutionControlProvider fails the proximal cause is not shown	PSU
JDK-8247432	15, 13, 11	Update IANA Language Subtag Registry to Version 2020-09-29	PSU
JDK-8247408	11	IdealGraph bit check expression canonicalization	PSU
JDK-8247354	11	AArch64: PopFrame causes assert(oopDesc::is_oop(obj)) failed: not an oop	PSU
JDK-8247350	8	[aarch64] assert(false) failed: wrong size of mach node	PSU
JDK-8246274	11	G1 old gen allocation tracking is not in a separate class	PSU
JDK-8245981	13	Upgrade to jQuery 3.5.1	PSU
JDK-8245511	11	G1 adaptive IHOP does not account for reclamation of humongous objects by young GC	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8244853	13	The static build of libextnet is missing the JNI_OnLoad_extnet function	PSU
JDK-8244847	11	Linux/PPC: runtime/CompressedOops/CompressedClassPointers: smallHeapTest fails	PSU
JDK-8244543	8	Enhanced handling of abstract classes	PSU
JDK-8244500	15	jtreg test error in test/hotspot/jtreg/containers/docker/TestMemoryAwareness.java	PSU
JDK-8244473	8	Contextualize registration for JNDI	PSU
JDK-8244205	11	HTTP/2 tunnel connections through proxy may be reused regardless of which proxy is selected	PSU
JDK-8244154	15, 13	Update SunPKCS11 provider with PKCS11 v3.0 header files	PSU
JDK-8244151	13	Update MUSCLE PC/SC-Lite headers to the latest release 1.8.26	PSU
JDK-8244088	15, 13	[Regression] Switch of Gnome theme ends up in deadlocked UI	PSU
JDK-8244087	13	2020-04-24 public suffix list update v ff6fcea	PSU
JDK-8244031	11	HttpClient should have more tests for HEAD requests	PSU
JDK-8243597	11	AArch64: Add support for integer vector abs	PSU
JDK-8243559	11, 8	Remove root certificates with 1024-bit keys	PSU
JDK-8243452	13, 11	JFR: Could not create chunk in repository with over 200 recordings	PSU
JDK-8243240	11	AArch64: Add support for MulVB	PSU
JDK-8243155	11	AArch64: Add support for SqrtVF	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8242919	11	Paste locks up jshell	PSU
JDK-8242557	11	Add length limit for strings in PNGImageWriter	PSU
JDK-8242429	11	Better implementation for signed extract	PSU
JDK-8242184	13	Default signature algorithm for an RSASSA-PSS key	PSU
JDK-8242010	13, 11	Update IANA Language Subtag Registry to Version 2020-04-01	PSU
JDK-8241960	11, 8	The SHA3 message digests impl of SUN provider are not thread safe after cloned	PSU
JDK-8241948	13	enhance list of environment variables printed in hs_err file	PSU
JDK-8241829	13, 11, 8	Cleanup the code for PrinterJob on windows	PSU
JDK-8241649	8	Optimize Character.toString	PSU
JDK-8241475	11	AArch64: Add missing support for PopCountVI node	PSU
JDK-8241372	11	Several test failures due to javax.net.ssl.SSLException: Connection reset	PSU
JDK-8241101	11	[s390] jtreg test failure after JDK-8238696: not conformant features string	PSU
JDK-8241087	11	Build failure with VS 2019 (16.5.0) due to C2039 and C2873	PSU
JDK-8241082	13, 11	Upgrade IANA Language Subtag Registry data to 03-16-2020 version	PSU
JDK-8240848	11	ArrayIndexOutOfBoundsException buf for TextCallbackHandler	PSU
JDK-8240487	15, 13, 11	Cleanup whitespace in .cc, .hh, .m, and .mm files	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8239536	11	Can't use <code>java.util.List</code> object after importing <code>java.awt.List</code>	PSU
JDK-8239400	8	[8u] clean up delete-non-virtual-dtor warnings in HotSpot	PSU
JDK-8239386	11	handle ContendedPaddingWidth in <code>vm_version_aarch64</code>	PSU
JDK-8239312	11	[macOS] <code>javax/swing/JFrame/NSTexturedJFrame/NSTexturedJFrame.java</code>	PSU
JDK-8239053	8	[8u] clean up undefined-var-template warnings	PSU
JDK-8238812	11	<code>assert(false)</code> failed: bad AD file	PSU
JDK-8238567	11	<code>SoftMainMixer.processAudioBuffers()</code> : Wrong handling of <code>stoppedMixers</code>	PSU
JDK-8238175	11	CTW: <code>Class.getDeclaredMethods</code> fails with <code>assert(k.is_subclass_of(SystemDictionary::Throwable_klass()))</code> failed: invalid exception class	PSU
JDK-8237804	11	<code>sun/security/mscapi</code> tests fail with "Key pair not generated, alias <nnnnnn> already exists"	PSU
JDK-8237743	11	<code>test/langtools/jdk/jshell/FailOverExecutionControlTest.java</code> fails No <code>ExecutionControlProvider</code> with name 'nonExistent' and parameter keys: []	PSU
JDK-8236992	11	AArch64: redundant <code>load_klass</code> in itable stub	PSU
JDK-8236859	11	<code>WebSocket</code> over authenticating proxy fails with NPE	PSU
JDK-8235368	13, 11	Update BCEL to Version 6.4.1	PSU
JDK-8234691	13	Potential double-free in <code>ParallelSPCleanupTask</code> constructor	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8234355	11	Buffer overflow in jcmd GC.class_stats due to too many classes	PSU
JDK-8234011	8	(zipfs) Memory leak in ZipFileSystem.releaseDeflater()	PSU
JDK-8233948	11	AArch64: Incorrect mapping between OptoReg and VMReg for high 64 bits of Vector Register	PSU
JDK-8233185	11	HttpServer.stop() blocks indefinitely when called on dispatch thread	PSU
JDK-8233006	11	freetype incorrectly adjusts advances when emboldening rotated glyphs	PSU
JDK-8232591	11	AArch64: Add missing match rules for smaddl, smsubl and smnegl	PSU
JDK-8232084	13, 11	HotSpot build failed with GCC 9.2.1	PSU
JDK-8231949	8	[PPC64, s390]: Make async profiling more reliable	PSU
JDK-8231841	11, 8	AArch64: debug.cpp help() is missing an AArch64 line for pns	PSU
JDK-8231713	11	x86_32 build failures after JDK-8226721 (Missing intrinsics for Math.ceil, floor, rint)	PSU
JDK-8231631	8	sun/net/ftp/FtpURLConnectionLeak.java fails intermittently with NPE	PSU
JDK-8231460	11	Performance issue (CodeHeap) with large free blocks	PSU
JDK-8231118	13	ARM32: Math tests failures	PSU
JDK-8230428	11, 8	Cleanup dead CastIP node code in formssel.cpp	PSU
JDK-8230010	13	Remove jdk8037819/BasicTest1.java	PSU
JDK-8230002	13	javax/xml/jaxp/unittest/transform/SecureProcessingTest.java runs zero test	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8229396	13	jdeps ignores multi-release when generate-module-info used on command line	PSU
JDK-8229243	13	SunPKCS11-Solaris provider tests failing on Solaris 11.4	PSU
JDK-8227609	13, 11	(fs) Files.newInputStream(...).skip(n) should allow skipping beyond file size	PSU
JDK-8227467	8	Better class method invocations	PSU
JDK-8227222	11	vmTestbase/jit/FloatingPoint/gen_math/Loops04/Loops04.java hits assert(!attributes.isUsesVl() (attributes.getVectorLen() == AVX_512bit) (!legacy_mode_vl) (attributes.isLegacyMode())) failed: XMM register should be 0-15	PSU
JDK-8227080	13, 11	(fs) Files.newInputStream(...).skip(n) is slow	PSU
JDK-8226721	11	Missing intrinsics for Math.ceil, floor, rint	PSU
JDK-8226627	11	assert(t.isSingleton()) failed: must be a constant	PSU
JDK-8226374	11	Restrict TLS signature schemes and named groups	PSU
JDK-8225773	13	jdeps --check produces NPE if there is any missing module dependence	PSU
JDK-8225756	11	[testbug] compiler/loopstripmining/CheckLoopStripMining.java sets too short a SafepointTimeoutDelay	PSU
JDK-8225438	11	javax/net/ssl/TLSCommon/TestSessionLocalPrincipal.java failed with Read timed out	PSU
JDK-8225116	11, 8	Test OwnedWindowsLeak.java intermittently fails	PSU
JDK-8225081	16, 15, 13, 11, 8	Remove Telia Company CA certificate expiring in April 2021	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8225072	15, 13	Add LuxTrust certificate that is expiring in March 2021 to list of allowed but expired certs	PSU
JDK-8223667	11	ASAN build broken	PSU
JDK-8223504	11	improve performance of forall loops by better inlining of "iterator()" methods.	PSU
JDK-8223444	11	Improve CodeHeap Free Space Management	PSU
JDK-8223020	11	aarch64: expand minL_rReg and maxL_rReg patterns into separate instructions	PSU
JDK-8222412	11	AARCH64: multiple instructions encoding issues	PSU
JDK-8222302	11	test/hotspot/jtreg/compiler/intrinsics/sha/cli/TestUseSHAOptionOnUnsupportedCPU.java fails on any other CPU	PSU
JDK-8220407	11	compiler/intrinsics/math/TestFpMinMaxIntrinsics.java timedout	PSU
JDK-8219586	11	CodeHeap State Analytics processes dead nmethods	PSU
JDK-8219142	11	Remove unused JIMAGE_ResourcePath	PSU
JDK-8218458	11	[TESTBUG] runtime/NMT/CheckForProperDetailStackTrace.java fails with Expected stack trace missing from output	PSU
JDK-8217918	11	C2: -XX:+AggressiveUnboxing is broken	PSU
JDK-8217561	11	x86: Add floating-point Math.min/max intrinsics	PSU
JDK-8217465	11	[REDO] - Optimize CodeHeap Analytics	PSU
JDK-8217348	11, 8	assert(thread::is_Java_thread()) failed: just checking	PSU
JDK-8217230	8	assert(t == t_no_spec) failure in NodeHash::check_no_speculative_types()	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8216314	11	SIGILL in CodeHeapState::print_names()	PSU
JDK-8216259	11	AArch64: Vectorize Adler32 intrinsics	PSU
JDK-8216184	11	CDS/appCDS tests failed on Windows due to long path to a classlist file	PSU
JDK-8216012	13	Infinite loop in RSA KeyPairGenerator	PSU
JDK-8215009	11	GCC 8 compilation error in libjli	PSU
JDK-8214922	11	AArch64: Add vectorization support for fmin/fmax	PSU
JDK-8214854	11	JDWP: Unforseen output truncation in logging	PSU
JDK-8214512	11	ARM32: Jtreg test compiler/c2/Test8062950.java fails on ARM	PSU
JDK-8214345	8	infinite recursion while checking super class	PSU
JDK-8214128	11	ARM32: wrong stack alignment on Deoptimization::unpack_frames	PSU
JDK-8213845	11	ARM32: Interpreter doesn't call result handler after native calls	PSU
JDK-8213794	11	ARM32: disable TypeProfiling, CriticalJNINatives, Serviceability tests for ARM32	PSU
JDK-8213725	11	JShell NullPointerException due to class file with unexpected package	PSU
JDK-8213483	11	ARM32: runtime/ErrorHandling/ShowRegistersOnAssertTest.java jtreg test fail	PSU
JDK-8213231	11	ThreadSnapshot::_threadObj can become stale	PSU
JDK-8211227	16	Inconsistent TLS protocol version in debug output	PSU
JDK-8209996	8	[PPC64] Fix JFR profiling.	PSU
JDK-8209459	11	TestSHA512MultiBlockIntrinsics failed on AArch64	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8208061	11	runtime/LoadClass/TestResize.java fails with "Load factor too high" when running in CDS mode	PSU
JDK-8207779	11	Method::is_valid_method() compares 'this' with NULL	PSU
JDK-8207404	11	MulticastSocket tests failing on AIX	PSU
JDK-8207247	11	AArch64: Enable Minimal and Client VM builds	PSU
JDK-8207160	11	ClassLoader::adjustMethodParams can potentially return null if the args list is empty	PSU
JDK-8206243	8	java -XshowSettings fails if memory.limit_in_bytes overflows LONG.max	PSU
JDK-8205014	8	com/sun/jndi/ldap/DeadSSLLdapTimeoutTest.java failed with "Read timed out"	PSU
JDK-8203196	8	C1 emits incorrect code due to integer overflow in _tableswitch keys	PSU
JDK-8202343	13	Disable TLS 1.0 and 1.1	PSU
JDK-8199646	11	JShell tests: jdk/jshell/FailOverDirectExecutionControlTest.java failed with java.lang.UnsupportedOperationException	PSU
JDK-8199265	8	java/util/Arrays/TimSortStackSize2.java fails with OOM	PSU
JDK-8196415	16	Disable SHA-1 Signed JARs	PSU
JDK-8196100	11	javax/swing/text/JTextComponent/5074573/bug5074573.java fails	PSU
JDK-8196092	8	javax/swing/JComboBox/8032878/bug8032878.java fails	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8195841	11	PNGImageReader.readNullTerminatedString() doesnt check for non-null terminated strings with length equal to maxLen	PSU
JDK-8191955	8	AArch64: incorrect prefetch distance causes an internal error	PSU
JDK-8190763	11	Class cast exception on (CompoundEdit) UndoableEditEvent.getEdit()	PSU
JDK-8190679	8	java/util/Arrays/TimSortStackSize2.java fails with "Initial heap size set to a larger value than the maximum heap size"	PSU
JDK-8190332	8	PngReader throws NegativeArraySizeException/OOM error when IHDR width is very large	PSU
JDK-8187450	11	JNI local refs exceeds capacity warning in NetworkInterface::getAll	PSU
JDK-8185734	11	[Windows] Structured Exception Catcher missing around gtest execution	PSU
JDK-8183910	8	gc/arguments/TestAggressiveHeap.java fails intermittently	PSU
JDK-8180478	8	tools/launcher/MultipleJRE.sh fails on Windows because of extra-	PSU
JDK-8178403	8	DirectAudio in JavaSound may hang and leak	PSU
JDK-8177809	8	File.lastModified() is losing milliseconds (always ends in 000)	PSU
JDK-8177068	11	incomplete classpath causes NPE in Flow	PSU
JDK-8172188	8	JDI tests fail due to "permission denied" when creating temp file	PSU
JDK-8171303	11	sun/java2d/pipe/InterpolationQualityTest.java fails on Windows & Linux	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8166724	8	gc/g1/TestHumongousShrinkHeap.java fails with OOME	PSU
JDK-8166046	8	[TESTBUG] compiler/stringopts/TestStringObjectInitialization.java fails with OOME	PSU
JDK-8159898	8	Negative array size in java/beans/Introspector/Test8027905.java	PSU
JDK-8153005	11	Upgrade the default PKCS12 encryption/MAC algorithms	PSU
JDK-8151786	8	[TESTBUG] java/beans/XMLEncoder/Test4625418.java timed out intermittently	PSU
JDK-8138820	8	JDK Hotspot build fails with Xcode 7.0.1	PSU
JDK-8136592	8	[TEST_BUG] Fix 2 platform-specific closed regtests for jigsaw	PSU
JDK-8134883	8	C1 hard crash in range check elimination in Nashorn test262parallel	PSU
JDK-8134672	8	[TEST_BUG] Some tests should check isDisplayChangeSupported	PSU
JDK-8132709	8	[TESTBUG] gc/g1/TestHumongousShrinkHeap.java might fail on embedded	PSU
JDK-8132148	8	G1 hs_err region dump legend out of sync with region values	PSU
JDK-8130430	8	[TEST_BUG] remove unnecessary internal calls from javax/swing/JRadioButton/8075609/bug8075609.java	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8130308	8	Too low memory usage in TestPromotionFromSurvivorToTenuredAfterMinorGC.java	PSU
JDK-8129511	8	PlatformMidi.c:83 uses malloc without malloc header	PSU
JDK-8081764	8	[TEST_BUG] Test javax/swing/plaf/aqua/CustomComboBoxFocusTest.java fails on Windows, Solaris Sparcv9 and Linux but passes on MacOSX	PSU
JDK-8078855	8	[TEST_BUG] javax/swing/JComboBox/8032878/bug8032878.java fails in WindowsClassicLookAndFeel	PSU
JDK-8076190	11	Customizing the generation of a PKCS12 keystore	PSU
JDK-8075071	8	[TEST_BUG] TimSortStackSize2.java: OOME: Java heap space: MaxHeap shrunk by MaxRAMFraction	PSU
JDK-8074836	8	Resolve disabled warnings for liboskrb5	PSU
JDK-8074835	8	Resolve disabled warnings for libj2gss	PSU
JDK-8073446	16, 15, 13, 11, 8	TimeZone getOffset API does not return a DST offset between years 2038-2137	PSU
JDK-8071374	8	Native disassembler implementation may be not thread-safe	PSU
JDK-8066807	8	langtools/test/Makefile should use -agentvm not -samevm	PSU
JDK-8066508	8	JTReg tests timeout on slow devices when run using JPRT	PSU
JDK-8064909	8	FragmentMetaspace.java got OutOfMemoryError	PSU
JDK-8055754	8	filemap.cpp does not compile with clang	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8047939	8	[TESTBUG] Rewrite test/runtime/8001071/Test8001071.sh	PSU
JDK-8042891	8	Format issues embedded in macros for two g1 source files	PSU
JDK-8037825	8	Fix warnings and enable "warnings as errors" in serviceability native libraries	PSU
JDK-8036095	8	RMI tests using testlibrary.RMID and testlibrary.JavaVM do not pass through vmoptions	PSU
JDK-8035287	8	gcc warnings compiling various libraries files	PSU
JDK-8035054	8	JarFacade.c should not include ctype.h	PSU
JDK-8034857	8	gcc warnings compiling src/solaris/native/sun/management	PSU
JDK-8034856	8	gcc warnings compiling src/solaris/native/sun/security/pkcs11	PSU
JDK-8033289	8	clang: clean up unused function warning	PSU
JDK-8032050	8	TEST_BUG: Clean up for java/rmi/activation/Activatable/shutdownGracefully/ShutdownGracefully.java	PSU
JDK-8028618	8	[TEST BUG] javax/swing/JScrollBar/bug4202954/bug4202954. java fails	PSU
JDK-8023980	16	JCE doesn't provide any class to handle RSA private key in PKCS#1	PSU
JDK-7146776	15	Deadlock between URLStreamHandler.getHostAddress and file.Handler.openConnection	PSU
JDK-7106851	11, 8	Test should not use System.exit	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-7059970	8	Test case: javafx/imageio/plugins/png/ITXtTest.java is not closing a file	PSU
JDK-6990210	8	[TEST_BUG] EventDispatchThread/HandleExceptionOnEDT/HandleExceptionOnEDT.java fails on gnome	PSU
JDK-6878250	8	(so) IllegalBlockingModeException thrown when reading from a closed SocketChannel's InputStream	PSU
JDK-6847157	11	java.lang.NullPointerException: HDC for component at sun.java2d.loops.Blit.Blit	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-8263111	16, 15, 8	Enhance String Conclusions	CPU
JDK-8262975	16, 15, 8	Upgrade Glib support	CPU
JDK-8262366	16, 15, 8	Update glib to version 2.66.7	CPU
JDK-8262365	16, 15, 8	Update GStreamer to version 1.18.3	CPU
JDK-8269424	16	Some SuppressWarnings annotations can be more localized	PSU
JDK-8269259	16	Remove obsolete apps, tests, and scripts	PSU
JDK-8269244	16	[IDE] Dependency verification of *-sources.jar fails when doing gradle sync	PSU
JDK-8269026	16	PasswordField doesn't render bullet character on Android	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8268915	16	WebKit build fails with Xcode 12.5	PSU
JDK-8268219	16	hlsprogressbuffer should provide PTS after GStreamer update	PSU
JDK-8268152	16, 8	gstmpegaudioparse does not provides timestamps for HLS MP3 streams	PSU
JDK-8268120	16	Allow hardware cursor to be used on Monocle-EGL platforms	PSU
JDK-8267892	16	Add .gitattributes to repo	PSU
JDK-8267858	16	Document that title property in WebEngine gets updated asynchronously	PSU
JDK-8267819	16	CoInitialize/CoUninitialize should be called on same thread	PSU
JDK-8267621	16	Mark HonorDeveloperSettingsTest as unstable on Linux	PSU
JDK-8267554	16	Support loading stylesheets from data-URIs	PSU
JDK-8267551	16	Support loading images from inline data-URIs	PSU
JDK-8267505	16	{List,Set,Map}PropertyBase::bind should check against identity	PSU
JDK-8267418	16	IntelliJ build and test of JavaFX does not work	PSU
JDK-8267392	16	ENTER key press on editable TableView throws NPE	PSU
JDK-8267314	16	Loading some animated GIFs fails with ArrayIndexOutOfBoundsException: Index 4096 out of bounds for length 4096	PSU
JDK-8267160	16	Monocle mouse never get ENTERED state	PSU
JDK-8267121	16	Illegal access to private "size" field of ArrayList from build.gradle	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8267094	16	TreeCell: cancelEvent must return correct editing location	PSU
JDK-8266968	16	Ignore test.com.sun.webkit.LocalStorageAccessTest	PSU
JDK-8266966	16, 8	Wrong CSS properties are applied to other nodes after fix for JDK-8204568	PSU
JDK-8266919	16	Gradle verification fails on windows x86	PSU
JDK-8266860	16	[macos] Incorrect duration reported for HLS live streams	PSU
JDK-8266811	16	Openjfx controls test build broken (Eclipse)	PSU
JDK-8266757	16	Add entry for jdk-12_doc-all.zip to gradle/verification-metadata.xml	PSU
JDK-8266643	16	Intermittent failure of HonorDeveloperSettingsTest unit test	PSU
JDK-8266539	16	[TreeView]: Change.getRemoved() contains null item when deselecting a TreeItem	PSU
JDK-8266516	16	One label typo in the properties for bi-directional text	PSU
JDK-8266224	16	GitHub actions: use gcc 10.3 on Linux	PSU
JDK-8265758	16	[TestBug] Remove ignored unit test from CustomMenuItemTest	PSU
JDK-8265669	16	AccumCell should not be visible	PSU
JDK-8265514	16	Openjfx controls running tests broken (Eclipse)	PSU
JDK-8265513	16	Openjfx graphics build broken (Eclipse)	PSU
JDK-8265469	16	Allow to build media and webkit for Linux-AArch64	PSU
JDK-8265439	16	[TestBug] Enable and fix ignored unit tests in MenuItemTest	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8265425	16	Hard failure when building OpenJFX for Linux AArch64	PSU
JDK-8265400	16	Update to gcc 10.3 on Linux	PSU
JDK-8265399	16	Update to Visual Studio 2019 version 16.9.3	PSU
JDK-8265277	16	SkinBase::registerChangeListener missing '@since 9' javadoc tag	PSU
JDK-8265210	16	TreeCell: cell editing state not updated on cell re-use	PSU
JDK-8265206	16	Tree-/TableCell: editing state not updated on cell re-use	PSU
JDK-8265031	16	Change default macOS min version for x86_64 to 10.12 and aarch64 to 11.0	PSU
JDK-8264998	16	Empty Jars shouldn't have Automatic-Module-Name	PSU
JDK-8264990	16, 8	WebEngine crashes with segfault when not loaded through system classloader	PSU
JDK-8264952	16	[TestBug] Controls unit tests - ControlTest and SpinnerTest fail for non US Locale	PSU
JDK-8264928	16	Update to Xcode 12.4	PSU
JDK-8264770	16	BidirectionalBinding should use InvalidationListener to prevent boxing	PSU
JDK-8264737	16	JavaFX media stream stops playing after reconnecting via Remote Desktop	PSU
JDK-8264677	16	MemoryLeak: Progressindicator leaks, when treeShowing is false	PSU
JDK-8264219	16	tools/scripts/build.ps1 is out of date and no longer works	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8264157	16	Items of non-editable ComboBox cannot be selected using up/down keys	PSU
JDK-8264140	16	Add -Djava.security.manager=allow to JavaFX tests calling setSecurityManager	PSU
JDK-8264139	16	Suppress removal warnings for Security Manager methods	PSU
JDK-8264138	16	Replace uses of Class.newInstance	PSU
JDK-8264137	16	Suppress deprecation and removal warnings of internal methods	PSU
JDK-8264127	16	ListCell editing status is true, when index changes while editing	PSU
JDK-8264064	16	Cross compile JavaFX graphics and controls modules for Windows AArch64 (ARM64)	PSU
JDK-8264010	16	Add Gradle dependency verification	PSU
JDK-8263807	16	Button types of a DialogPane are set twice, returns a wrong button	PSU
JDK-8263788	16, 8	JavaFX application freezes completely after some time when using the WebView	PSU
JDK-8263761	16	Update boot JDK to 16.0.1	PSU
JDK-8263760	16	Update gradle to version 7.0.1	PSU
JDK-8263402	16	MemoryLeak: Node hardreferences it's previous Parent after csslayout and getting removed from the scene	PSU
JDK-8263322	16	Calling Application.launch on FX thread should throw IllegalStateException, but causes deadlock	PSU
JDK-8263169	16, 8	[macOS] JavaFX windows open as tabs when system preference for documents is set	PSU
JDK-8262396	16	Update Mesa 3-D Headers to version 21.0.3	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8262276	16, 8	Debug build of WebKit fails	PSU
JDK-8261840	16	Submenus close to screen borders are no longer repositioned	PSU
JDK-8260246	8	Ensemble: Update version of Lucene to 7.7.3	PSU
JDK-8260245	16, 8	Update ICU4C to version 68.2	PSU
JDK-8259555	8	Webkit crashes on Apple Silicon	PSU
JDK-8259356	16, 8	MediaPlayer's seek freezes video	PSU
JDK-8259046	8	ViewPainter.ROOT_PATHS holds reference to Scene causing memory leak	PSU
JDK-8258986	8	getColor throws IOOBE when PixelReader reads the same pixel twice	PSU
JDK-8258777	16	SkinBase: add api to un-/register invalidation-/listChange listeners	PSU
JDK-8258663	16	Fixed size TableCells are not removed from scene graph when column is removed	PSU
JDK-8252820	16	Skins: cleanup use of deprecated snapSize/snapPosition	PSU
JDK-8252783	16	Remove the css Selector and ShapeConverter constructors	PSU
JDK-8252238	16	TableView: Editable (pseudo-editable) cells should respect the row editability	PSU
JDK-8251555	8	Remove unused focusedWindow field in glass Window to avoid leak	PSU
JDK-8244075	16	Accelerator of ContextMenu's MenuItem is not removed when ContextMenu is removed from Scene	PSU
JDK-8240336	16	JavaFX build uses deprecated features that will be removed in gradle 7	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8239880	16	CSS tests should cleanup any global state they modify	PSU
JDK-8239138	16	StyleManager should use a BufferedInputStream	PSU
JDK-8234920	16	Add SpotLight to the selection of 3D light types	PSU
JDK-8234175	16	Remove obsolete ServiceWithSecurityManagerTest unit test	PSU
JDK-8234084	16	[TEST_BUG] Remove unexecuted performance benchmark tests	PSU
JDK-8234077	16	Evaluate ignored unit tests in RenderRootTest	PSU
JDK-8232379	16, 8	Need to remove large icudt64l.zip binary file from source repository	PSU
JDK-8217955	16	Problems with touch input and JavaFX 11	PSU
JDK-8210199	16	[linux / macOS] fileChooser can't handle emojis	PSU
JDK-8208088	16	Memory Leak in ControlAcceleratorSupport	PSU
JDK-8203345	8	Memory leak in VirtualFlow when screen reader is enabled	PSU
JDK-8196065	16	ListChangeListener getRemoved() returns items that were not removed.	PSU
JDK-8189354	16	Change.getRemoved() list contains incorrect selected items when a TreeItem is collapsed	PSU
JDK-8186904	16	TableColumnHeader: resize cursor lost on right click	PSU
JDK-8185854	8	NPE on non-editable ComboBox in TabPane with custom Skin	PSU
JDK-8165214	16	ListView.EditEvent.getIndex() does not return the correct index	PSU
JDK-8137323	16	Incorrect parsing of mnemonic in controls text	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8089589	16	[ListView] ScrollBar content moves toward-backward during scrolling.	PSU
JDK-8088739	16	[TestBug] RegionBackgroundImageUITest fail with timeout error	PSU

Azul Zulu Bug Fixes

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

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-26220	16, 15, 13, 11, 8	MSI Installer Should Update JAVA_HOME	CPU
ZULU-26149	8	.diz bundles contain incorrect paths	CPU
ZULU-25214	8	Flag -XX:+UseBCFIPS does not work on windows	CPU
ZULU-27870	8	qnx-arm32hf build fails: 'struct stat64' has no members named 'st_mtim' and 'st_atim'	PSU
ZULU-27406	15	Failure in 57 tests compiler/aot/* - JVMCIError: VM config values missing that should be present	PSU
ZULU-26949	8	Update OpenJSSE version to 1.1.7	PSU
ZULU-26940	16, 15, 13, 11, 8, 7, 6	Zulu installation fails on Debian Slim	PSU
ZULU-26842	11	Test gtest/GTestWrapper.java crashes with SIGSEGV	PSU
ZULU-26449	11	Adjust FreeType's synthetic emboldening to mimic T2K	PSU
ZULU-26031	11	New test compiler/intrinsics/Test8237524.java fails against Zulu 11 Arm32	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-25949	11, 8	Test sun/management/jmxremote/bootstrap/CustomLancherTest.java bug: libjvmPath should be checked, not libPath	PSU
ZULU-25372	8	Bump LZ4 version to 1.9.3	PSU
ZULU-23831	16, 15, 13, 11, 8, 7, 6	[HSDIS] Fix HSDIS build scripts to make it work on embedded architectures	PSU
ZULU-22367	8	Swing classes are extremely slow when displaying Hebrew text	PSU
ZULU-22234	8	CRIU exec "iptables" message mis-labeled as error	PSU
ZULU-20055	8	Failure in tools/pack200/TimeStamp.java - jre/bin/unpack200 should exist and be executable	PSU
ZULU-13025	8	sun/jvmsstat/monitor/MonitoredVm/MonitorVmStartTerminate.java timed out	PSU

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