



Azul Zulu builds of OpenJDK

October 2021 Quarterly Update

Release Notes

Revision 1.1

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Revision History

Revision	Date	Description
0.1	October 19, 2021	Initial version of the document.
1.0	October 19, 2021	Added information about the CVEs fixed in this release.
1.1	October 21, 2021	Added information about the per-user installation on Windows. Updated the version table with the correct versions for Azul Zulu 17.

Release Details

This release is a quarterly update release for Azul Zulu Builds of OpenJDK version 17, 15, 13, 11, 8, 7, and 6. The following table lists detailed information on the Azul Zulu versions released with the current update.

Azul Zulu Version*	Update Type**	JDK Version	Based on		JavaFX Version
			Azul Zulu Version	JDK Version	
17.30.15 (CA) 17.30.16 (SA)	PSU	17.0.1+12	17.28	17+35	17.0.1+101
15.35.12 (SA)	CPU	15.0.4.0.101+1	15.34	15.0.4+5	16.0.2.0.101+100
15.36.13 (CA) 15.36.14 (SA)	PSU	15.0.5+3	15.35	15.0.4.0.101+1	17.0.1+101
13.43.12 (SA)	CPU	13.0.8.0.101+1	13.42	13.0.8+5	16.0.2.0.101+100
13.44.13 (CA) 13.44.14 (SA)	PSU	13.0.9+3	13.43	13.0.8.0.101+1	17.0.1+101
11.51.16 (SA)	CPU	11.0.12.0.101+2	11.50	11.0.12+7	16.0.2.0.101+100
11.52.13 (CA) 11.52.14 (SA)	PSU	11.0.13+8	11.51	11.0.12.0.101+2	17.0.1+101
8.57.0.14 (SA)	CPU	8u311-b02	8.56	8u302-b08	8u311-b01
8.58.0.13 (CA) 8.58.0.14 (SA)	PSU	8u312-b07	8.57	8u311-b02	8u312-b01
7.49.0.14 (SA)	CPU	7u321-b01	7.48	7u312-b01	N/A
7.50.0.11 (CA) 7.50.0.12 (SA)	PSU	7u322-b01	7.49	7u321-b01	N/A
6.43 (SA)	CPU	6b143	6.41	6b141	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	17
Windows (x86 32/64-bit)							
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 11	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Windows 10	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows 8.1	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows (ARM 64-bit)							
Windows 11	n/a	n/a	n/a	n/a	n/a	n/a	Yes
Windows 10	n/a	n/a	n/a	n/a	n/a	n/a	Yes
Linux (x86 32/64-bit)							
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 11	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	Yes	Yes	Yes	Yes	Yes
Ubuntu 18.04	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Alpine Linux 3.11 or later	n/a	n/a	n/a	n/a	n/a	n/a	Yes

Linux with kernel 3.10.x and glibc 2.23	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Linux (ARM 32-bit Hard-Float)							
Ubuntu 18.04 [3]	n/a	n/a	Yes	Yes	n/a	n/a	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 with kernel 3.10.x and glibc 2.9 [3]	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Linux (ARM 32-bit Soft-Float) [4]							
Linux with kernel 2.6.34 and GLIBC 2.5 [5]	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Debian 7 Wheezy [6]	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Linux with kernel 3.10.x and GLIBC 2.9 [6]	n/a	n/a	Yes	Yes	n/a	n/a	n/a
Linux (MIPS 32-bit) [7]							
Linux with kernel 4.9.59 and glibc 2.9 [8]	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 [9]	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 [10]	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 64-bit)							
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 Hat 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 use FPU, if it is present and available, to speed up floating point operations. Bundles with both C1 and C2 compilers require FPU.
5. Bundles with the C1 compiler. Tested on ARMv5 hardware.
6. Bundles with the C1 compiler were tested on ARMv6 and ARMv7 hardware. Bundles with both C1 and C2 compilers were tested on ARMv7 hardware.
7. MIPS32r2 ISA, Big Endian, FPU in 32-bit mode or equivalent emulation.
8. Linux soft-float O32 MIPS ABI
9. Bundles for this platform were tested on QorIQ® T4240-RDB.
10. Hard-Float EABI bundles were tested on QorIQ® T1024RDB. SPE ABI bundles were tested on NXP® P2020RDB.

What's New

Windows 11 support

Azul Zulu is now available for Windows 11 (x86 32/64-bit, Arm64). For more details, see [Supported Windows platforms](#).

`-embvm-` removed from bundle names

The `-embvm-` suffix has been removed from the names of Azul Zulu bundles (bundles

built with the option `JAVASE_EMBEDDED`). Apart from the file name change, the bundles' content and functionality remain unaffected in this release. However, Azul also stops using the `JAVASE_EMBEDDED` build option starting January 2022. See [the note below](#) for details.

Keyboard shortcuts events fixed on macOS (Arm64)

Azul Zulu 11, 13, 15 include fixes for proper handling of events produced by keyboard shortcuts on the Arm64 macOS platform. For more information, see [JDK-8272602](#).

Fixed crashes on Arm64-based macOS 12

Azul Zulu 8, 11, 13, 15 include fixes for intermittent crashes that have been reported for several beta versions of the Arm64-based macOS 12 platform.

Interaction of `URLConnection` with a proxy enhanced

In previous versions of Azul Zulu 6, 7, and 8, the `URLConnection` class displayed unexpected behavior when used with a proxy. The class used to fall back to a direct connection in case it could not connect through a proxy server (see [JDK-8161016](#)). Now `URLConnection` does not use a direct connection if the target proxy server is down or otherwise misconfigured. Consider this enhancement when migrating to the new version of Azul Zulu.

Windows per-user installation support

Starting this release, Azul Zulu MSI installers for Windows support per-user installation. The feature is added in the following versions: 17.30, 15.36, 13.44, 11.52, 8.58, 7.50.

Notice of Upcoming Changes

- `JAVASE_EMBEDDED` build configuration will be dropped.

Starting January 2022, Azul stops using the `JAVASE_EMBEDDED` option to build Azul Zulu bundles intended for embedded systems. This build-time option tunes Azul Zulu bundles in a way to demonstrate better startup performance on some embedded systems. Azul Zulu bundles built with this option can be identified by the `-embvm-`

suffix in the bundle file name (this suffix was removed from bundle names in October 2021). The rationale for dropping the `JAVASE_EMBEDDED` option is that you can achieve the same startup behavior by using the following JVM flags when running Azul Zulu:

```
-XX:GuaranteedSafepointInterval=0
-XX:-UsePerfData
-XX:-CleanChunkPoolAsync
```

- **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 8 (8.57.0.14) on Oracle Solaris 11.4 (x86_64, SPARC), you may encounter the error `java.lang.Error: Error during hash calculation`. This error occurs only when running Azul Zulu with the `-XX:+UseLegacy8uJSSE` flag. This flag forces the JVM to fall back to an older implementation of TLS protocol stack (TLS 1.2 and earlier). This fallback behavior might be useful for legacy Java applications to avoid compatibility issues.

As a workaround, you can run Azul Zulu without `-XX:+UseLegacy8uJSSE`. If you still need this flag, you can append the following configuration to the file

{ZULU_HOME}/jre/lib/security/legacy8ujsse.security:

```
jdk.tls.disabledAlgorithms=SSLv3, TLSv1, TLSv1.1, RC4, DES,  
MD5withRSA, \  
    DH keySize < 1024, EC keySize < 224, 3DES_EDE_CBC, anon, NULL,  
\  
    GCM, \  
    include jdk.disabled.namedCurves
```

IANA Time Zone Database version

This release of Azul Zulu comes with IANA Time Zone Database version 2021a.

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-2021-3517	JavaFX (libxml)	Multiple	Yes	8.6	Network	Low	None	None	Unchanged	Low	Low	High	17, 15, 13, 11, 8	Note 1
CVE-2021-35567	Libraries	Kerberos	No	6.8	Network	Low	Low	Required	Changed	High	None	None	17, 15, 13, 11, 8	Note 2
CVE-2021-35550	JSSE	TLS	Yes	5.9	Network	High	None	None	Unchanged	High	None	None	11, 8, 7, 6	Note 2
CVE-2021-3522	JavaFX (GStreamer)	None	No	5.5	Local	Low	None	Required	Unchanged	None	None	High	17, 15, 13, 11, 8	Note 1
CVE-2021-35556	Swing	Multiple	Yes	5.3	Network	Low	None	None	Unchanged	None	None	Low	17, 15, 13, 11, 8, 7, 6	Note 1
CVE-2021-35559	Swing	Multiple	Yes	5.3	Network	Low	None	None	Unchanged	None	None	Low	17, 15, 13, 11, 8, 7, 6	Note 2
CVE-2021-35561	Utility	Multiple	Yes	5.3	Network	Low	None	None	Unchanged	None	None	Low	17, 15, 13, 11, 8, 7, 6	Note 2
CVE-2021-35564	Keytool	Multiple	Yes	5.3	Network	Low	None	None	Unchanged	None	Low	None	17, 15, 13, 11, 8, 7, 6	Note 2
CVE-2021-35565	JSSE	TLS	Yes	5.3	Network	Low	None	None	Unchanged	None	None	Low	15, 13, 11, 8, 7, 6	Note 3
CVE-2021-35578	JSSE	TLS	Yes	5.3	Network	Low	None	None	Unchanged	None	None	Low	17, 15, 13, 11, 8	Note 3

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-2021-35586	ImageIO	Multiple	Yes	5.3	Network	Low	None	None	Unchanged	None	None	Low	17, 15, 13, 11, 8, 7, 6	Note 2
CVE-2021-35603	JSSE	TLS	Yes	3.7	Network	High	None	None	Unchanged	Low	None	None	17, 15, 13, 11, 8, 7, 6	Note 2
CVE-2021-35588	Hotspot	Multiple	Yes	3.1	Network	High	None	Required	Unchanged	None	None	Low	8, 7, 6	Note 2
CVE-2021-27290	Oracle GraalVM Enterprise Edition: Node (Node.js)	Multiple	Yes	7.5	Network	Low	None	None	Unchanged	None	None	High	None	
CVE-2021-35560	Deployment	Multiple	Yes	7.5	Network	High	None	Required	Unchanged	High	High	High	None	Note 1

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.
3	This vulnerability can only be exploited by supplying data to APIs in the specified Component without using Untrusted applications, such as through a web service.

Additional CVEs addressed: The updates that address CVE-2021-3517 also address CVE-2021-3537.

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-8270404	17, 15, 13, 11, 8, 7, 6	Better canonicalization	CPU
JDK-8270398	17, 15, 13, 11, 8, 7, 6	Enhance canonicalization	CPU
JDK-8270212	17, 15, 13, 11, 8, 7, 6	Improve KeyFactory key generation	CPU
JDK-8269763	17, 15, 13, 11, 8, 7, 6	The JEditorPane is blank after JDK-8265167	CPU
JDK-8269624	17, 15, 13, 11, 8, 7, 6	Enhance method selection support	CPU
JDK-8268506	17, 15, 13, 11, 8, 7, 6	More Manifest Digests	CPU
JDK-8268205	17, 15, 13, 11	Enhance DTLS client handshake	CPU
JDK-8268199	17, 15, 13, 11, 8	Correct certificate requests	CPU
JDK-8268193	17, 15, 13, 11, 8	Improve requests of certificates	CPU
JDK-8268059	8, 7, 6	Perfectly perplexing proclivity in the presence of a proxy	CPU
JDK-8267712	17, 15, 13, 11, 8, 7, 6	Better LDAP reference processing	CPU
JDK-8267086	17, 15, 13, 11, 8, 7, 6	ArrayIndexOutOfBoundsException in java.security.KeyFactory.generatePublic	CPU
JDK-8266115	17, 15, 13, 11, 8, 7, 6	More Manifest Jar Loading	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8266109	17, 15, 13, 11, 8, 7, 6	More Resilient Classloading	CPU
JDK-8266103	17, 15, 13, 11, 8, 7, 6	Better specified spec values	CPU
JDK-8265776	17, 15, 13, 11, 8, 7, 6	Improve Stream handling for SSL	CPU
JDK-8265574	17, 15, 13, 11, 8, 7, 6	Improve handling of sheets	CPU
JDK-8263314	17, 15, 13, 11, 8, 7, 6	Enhance XML Dsig modes	CPU
JDK-8268500	17	Better specified ParameterSpecs	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-8272602	15, 13, 11	[macOS] not all KEY_PRESSED events sent when control modifier is used	CPU
JDK-8270533	8	AArch64: size_fits_all_mem_uses should return false if its output is a CAS	CPU
JDK-8270404	17, 15, 13, 11, 8, 7, 6	Better canonicalization	CPU
JDK-8270398	17, 15, 13, 11, 8, 7, 6	Enhance canonicalization	CPU
JDK-8270212	17, 15, 13, 11, 8, 7, 6	Improve KeyFactory key generation	CPU
JDK-8269763	17, 15, 13, 11, 8, 7, 6	The JEditorPane is blank after JDK-8265167	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8269624	17, 15, 13, 11, 8, 7, 6	Enhance method selection support	CPU
JDK-8269618	17, 15, 13, 11, 8, 7, 6	Better session identification	CPU
JDK-8268506	17, 15, 13, 11, 8, 7, 6	More Manifest Digests	CPU
JDK-8268205	17, 15, 13, 11	Enhance DTLS client handshake	CPU
JDK-8268199	17, 15, 13, 11, 8	Correct certificate requests	CPU
JDK-8268193	17, 15, 13, 11, 8	Improve requests of certificates	CPU
JDK-8268071	8, 7, 6	Improved class naming	CPU
JDK-8268059	8, 7, 6	Perfectly perplexing proclivity in the presence of a proxy	CPU
JDK-8267735	17, 15, 13, 11, 8, 7, 6	Better BMP support	CPU
JDK-8267729	17, 15, 13, 11, 8	Improve TLS client handshaking	CPU
JDK-8267712	17, 15, 13, 11, 8, 7, 6	Better LDAP reference processing	CPU
JDK-8267086	17, 15, 13, 11, 8, 7, 6	ArrayIndexOutOfBoundsException in java.security.KeyFactory.generatePublic	CPU
JDK-8266689	17, 15, 13, 11, 8	More Constrained Delegation	CPU
JDK-8266137	17, 15, 13, 11, 8, 7, 6	Improve Keystore integrity	CPU
JDK-8266115	17, 15, 13, 11, 8, 7, 6	More Manifest Jar Loading	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8266109	17, 15, 13, 11, 8, 7, 6	More Resilient Classloading	CPU
JDK-8266103	17, 15, 13, 11, 8, 7, 6	Better specified spec values	CPU
JDK-8266097	17, 15, 13, 11, 8, 7, 6	Better hashing support	CPU
JDK-8265776	17, 15, 13, 11, 8, 7, 6	Improve Stream handling for SSL	CPU
JDK-8265580	17, 15, 13, 11, 8, 7, 6	Enhanced style for RTF kit	CPU
JDK-8265574	17, 15, 13, 11, 8, 7, 6	Improve handling of sheets	CPU
JDK-8265167	17, 15, 13, 11, 8, 7, 6	Richer Text Editors	CPU
JDK-8264210	11, 8, 7, 6	Better TLS connectivity	CPU
JDK-8263407	11	SPARC64 detection fails on Athena (SPARC64-X)	CPU
JDK-8263314	17, 15, 13, 11, 8, 7, 6	Enhance XML Dsig modes	CPU
JDK-8254967	15, 13, 11, 8, 7, 6	com.sun.net.HttpsServer spins on TLS session close	CPU
JDK-8248500	15, 13, 11, 8	AArch64: Remove the r18 dependency on Windows AArch64	CPU
JDK-8242882	11	opening jar file with large manifest might throw NegativeArraySizeException	CPU
JDK-8222751	11, 8, 7, 6	closed/test/jdk/sun/security/util/DerIndefLenConverter/IndefBerPkcs12.java fail	CPU
JDK-8183369	8, 7, 6	RFC unconformity of HttpURLConnection with proxy	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8163326	8, 7, 6	Update the default enabled cipher suites preference	CPU
JDK-8161016	8, 7, 6	Strange behavior of URLConnection with proxy	CPU
JDK-8157404	11, 8, 7, 6	Unable to read certain PKCS12 keystores from SequenceInputStream	CPU
JDK-8130183	8, 7, 6	InnerClasses: VM permits wrong Throw ClassFormatError if InnerClasses attribute's inner_class_info_index is 0	CPU
JDK-8017174	6	NPE when using Logger.getAnonymousLogger or LogManager.getLogManager().getLogger	CPU
JDK-6819122	6	DefaultProxySelector should lazily initialize the Pattern object and the NonProxyInfo objects	CPU
JDK-6737819	6	sun.misc.net.DefaultProxySelector doesn't use proxy setting to localhost	CPU
JDK-8274205	17, 11, 8	Handle KDC_ERR_SVC_UNAVAILABLE error code from KDC	PSU
JDK-8273939	11	Backport of 8248414 to JDK11 breaks MacroAssembler::adrp	PSU
JDK-8273671	15, 13	Backport of 8260616 misses one JNF header inclusion removal	PSU
JDK-8273358	17, 15, 13, 11, 8, 7	macOS Monterey does not have the font Times needed by Serif	PSU
JDK-8273150	17	Revert "8225083: Remove Google certificate that is expiring in December 2021"	PSU
JDK-8272903	17	Missing license header in ArenaAllocator.java	PSU
JDK-8272806	17	[macOS] "Apple AWT Internal Exception" when input method is changed	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8272772	11	Shenandoah: compiler/c2/aarch64/TestVolatilesShenandoah.java fails in 11u	PSU
JDK-8272714	8	[8u] Build failure after backport of JDK-8248901 with MSVC 2013	PSU
JDK-8272708	17	[Test]: Cleanup: test/jdk/security/infra/java/security/cert/CertPathValidator/certification/BuypassCA.java no longer needs ojspEnabled	PSU
JDK-8272700	17, 15, 11	[macos] Build failure with Xcode 13.0 after JDK-8264848	PSU
JDK-8272643	8	Backout JDK-8176837 from 8u312	PSU
JDK-8272581	17	sun/security/pkcs11/Provider/MultipleLogins.sh fails after JDK-8266182	PSU
JDK-8272472	17, 11	StackGuardPages test doesn't build with glibc 2.34	PSU
JDK-8272332	17, 11	--with-harfbuzz=system doesn't add -lharfbuzz after JDK-8255790	PSU
JDK-8272326	17	java/util/Random/RandomTestMoments.java had two Gaussian fails	PSU
JDK-8272214	8	[8u] Build failure after backport of JDK-8248901	PSU
JDK-8272197	11	Update 11u GHA workflow with Shenandoah configurations	PSU
JDK-8272131	17, 11	PhaseMacroExpand::generate_slow_arraycopy crash when clone null CallProjections.fallthrough_ioproj	PSU
JDK-8272124	17, 11, 8	Cgroup v1 initialization causes NullPointerException when cgroup path contains colon	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8272078	11	Wrong Checksums in Temurin BootJDK dependencies	PSU
JDK-8271925	17	ZGC: Arraycopy stub passes invalid oop to load barrier	PSU
JDK-8271589	17	Fatal error with variable shift count integer rotate operation.	PSU
JDK-8271466	8	[jdk8u] StackGap test fails on aarch64 due to "-m64"	PSU
JDK-8271276	17	C2: Wrong JVM state used for receiver null check	PSU
JDK-8271203	17	C2: assert(iff☐Opcode() == Op_If iff☐Opcode() == Op_CountedLoopEnd iff☐Opcode() == Op_RangeCheck) failed: Check this code when new subtype is added	PSU
JDK-8271199	8	Mutual TLS handshake fails signing client certificate with custom sensitive PKCS11 key	PSU
JDK-8270893	11	IndexOutOfBoundsException while reading large TIFF file	PSU
JDK-8270344	17	Session resumption errors	PSU
JDK-8270317	15, 13	Large Allocation in CipherSuite	PSU
JDK-8270280	17	security/infra/java/security/cert/CertPathValidator/certification/LetsEncryptCA.java OCSP response error	PSU
JDK-8270216	15, 13	[macOS] Update named used for Java run loop mode	PSU
JDK-8270196	11	[11u] [JVMCI] JavaType.toJavaName() returns incorrect type name for lambdas	PSU
JDK-8270184	11	[TESTBUG] Add coverage for jvmci ResolvedJavaType.toJavaName() for lambdas	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8270137	17, 11, 8	Kerberos Credential Retrieval from Cache not Working in Cross-Realm Setup	PSU
JDK-8270098	17	ZGC: ZBarrierSetC2::clone_at_expansion fails with "Guard against surprises" assert	PSU
JDK-8270096	17, 11	Shenandoah: Optimize gc/shenandoah/TestRefprocSanity.java for interpreter mode	PSU
JDK-8270094	17	Shenandoah: Provide human-readable labels for test configurations	PSU
JDK-8269993	17	[Test]: java/net/httpclient/DigestEchoClientSSL.java contains redundant @run tags	PSU
JDK-8269953	8	config.log is not in build directory after 8u backport of JDK-8079891	PSU
JDK-8269934	17, 15, 13, 11	RunThese24H.java failed with EXCEPTION_ACCESS_VIOLATION in java_lang_Thread::get_thread_status	PSU
JDK-8269897	17	Shenandoah: Resolve UNKNOWN access strength, where possible	PSU
JDK-8269882	17, 11, 8	stack-use-after-scope in NewObjectA	PSU
JDK-8269859	8	BacktraceBuilder._cprefs needs to be accessed as unsigned short	PSU
JDK-8269851	17, 11, 8	OperatingSystemMXBean getProcessCpuLoad reports incorrect process cpu usage in containers	PSU
JDK-8269850	11	Most JDK releases report macOS version 12 as 10.16 instead of 12.0	PSU
JDK-8269847	11	JDK-8269594 backport breaks 11u builds	PSU
JDK-8269810	8	[8u] Update generated_configure.sh after JDK-8250876 backport	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8269795	11	C2: Out of bounds array load floats above its range check in loop peeling resulting in SEGV	PSU
JDK-8269668	11	[aarch64] java.library.path not including /usr/lib64	PSU
JDK-8269661	11	JNI_GetStringCritical does not lock char array	PSU
JDK-8269650	11	Optimize gc-locker in [Get Release]StringCritical for latin string	PSU
JDK-8269614	11	[s390] Interpreter checks wrong bit for slow path instance allocation	PSU
JDK-8269594	11, 8	assert(_handle_mark_nesting > 1) failed: memory leak: allocating handle outside HandleMark	PSU
JDK-8269574	17	C2: Avoid redundant uncommon traps in GraphKit::builtin_throw() for JVMTI exception events	PSU
JDK-8269529	11	javax/swing/reliability/HangDuringStaticInitialization.java fails in Windows debug build	PSU
JDK-8269478	17, 11	Shenandoah: gc/shenandoah/mxbeans tests should be more resilient	PSU
JDK-8269415	11	[11u] Remove ea from DEFAULT_PROMOTED_VERSION_PRE in OpenJDK 11u	PSU
JDK-8269390	13	Bump update version for OpenJDK: jdk-13.0.9	PSU
JDK-8269356	15	Bump update version for OpenJDK: jdk-15.0.5	PSU
JDK-8269304	11	Regression ~5% in spec2005 in b27	PSU
JDK-8268965	15, 13, 11, 8	TCP Connection Reset when connecting simple socket to SSL server	PSU
JDK-8268963	17	[IR Framework] Some default regexes matching on PrintOptoAssembly in IRNode.java do not work on all platforms	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8268776	11	Test <code>ADatagramSocket.java</code> missing /othervm from @run tag	PSU
JDK-8268775	15, 13, 11	Password is being converted to String in AccessibleJPasswordField	PSU
JDK-8268771	11	javadoc -notimestamp option does not work on index.html	PSU
JDK-8268699	11	Shenandoah: Add test for JDK-8268127	PSU
JDK-8268635	15, 13, 11	Corrupt oop in ClassLoaderData	PSU
JDK-8268620	11	InfiniteLoopException test may fail on x86 platforms	PSU
JDK-8268617	11	[11u REDO] - WebSocket over authenticating proxy fails with NPE	PSU
JDK-8268500	17	Better specified ParameterSpecs	PSU
JDK-8268427	17, 15, 11	Improve AlgorithmConstraints:checkAlgorithm performance	PSU
JDK-8268417	11	Add test from JDK-8268360	PSU
JDK-8268369	11	SIGSEGV in PhaseCFG::implicit_null_check due to missing null check	PSU
JDK-8268366	11	Incorrect calculation of has_fpu_registers in C1 linear scan	PSU
JDK-8268362	11	[REDO] C2 crash when compile negative Arrays.copyOf length after loop	PSU
JDK-8268360	11	Missing check for infinite loop during node placement	PSU
JDK-8268347	11	C2: nested locks optimization may create unbalanced monitor enter/exit code	PSU
JDK-8268261	17, 11	C2: assert(n != __null) failed: Bad immediate dominator info.	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8268127	11	Shenandoah: Heap size may be too small for region to align to large page size	PSU
JDK-8268103	11, 8	JNI functions incorrectly return a double after JDK-8265836	PSU
JDK-8268019	17	C2: assert(no_dead_loop) failed: dead loop detected	PSU
JDK-8267773	11	PhaseStringOpts::int_stringSize doesn't handle min_jint correctly	PSU
JDK-8267751	11	(test) jtreg.SkippedException has no serialVersionUID	PSU
JDK-8267695	11	Bump update version for OpenJDK: jdk-11.0.13	PSU
JDK-8267666	17, 11	Add option to jcmd GC.heap_dump to use existing file	PSU
JDK-8267652	15	c2 loop unrolling by 8 results in reading memory past array	PSU
JDK-8267625	17, 15, 13, 11	AARCH64: typo in LIR_Assembler::emit_profile_type	PSU
JDK-8267459	11	Pasting Unicode characters into JShell does not work.	PSU
JDK-8267424	11	CTW: C1 fails with "State must not be null"	PSU
JDK-8267399	11	C2: java/text/Normalizer/ConformanceTest.java test failed with assertion	PSU
JDK-8267396	11	Avoid recording "pc" in unhandled oops detector for better performance	PSU
JDK-8267348	11	Rewrite gc/epsilon/TestClasses.java to use Metaspace with less classes	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8267042	11	bug in monitor locking/unlocking on ARM32 C1 due to uninitialized BasicObjectLock::_displaced_header	PSU
JDK-8266813	11	Shenandoah: Use shorter instruction sequence for checking if marking in progress	PSU
JDK-8266761	11	AssertionError in sun.net.httpserver.ServerImpl.responseCompleted	PSU
JDK-8266749	11	AArch64: Backtracing broken on PAC enabled systems	PSU
JDK-8266642	11	Improve ResolvedMethodTable hash function	PSU
JDK-8266615	11	C2 incorrectly folds subtype checks involving an interface array	PSU
JDK-8266480	11	Implicit null check optimization does not update control of hoisted memory operation	PSU
JDK-8266404	11	Fatal error report generated with -XX:+CrashOnOutOfMemoryError should not contain suggestion to submit a bug report	PSU
JDK-8266288	11	assert root method not found in witnessed_reabstraction_in_supers is too strong	PSU
JDK-8266248	15, 13, 11	Compilation failure in PLATFORM_API_MacOSX_MidiUtils.c with Xcode 12.5	PSU
JDK-8266206	11, 8	Build failure after JDK-8264752 with older GCCs	PSU
JDK-8266182	17	Automate manual steps listed in the test jdk/sun/security/pkcs12/ParamsTest.java	PSU
JDK-8266018	11	Shenandoah: fix an incorrect assert	PSU
JDK-8265978	8	make test should look for more locations when searching for exit code	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8265836	11, 8	OperatingSystemImpl.getCpuLoad() returns incorrect CPU load inside a container	PSU
JDK-8265773	11	Incorrect jdeps message "jdk8internals" to describe a removed JDK internal API	PSU
JDK-8265761	11	Font with missed font family name is not properly printed on Windows	PSU
JDK-8265756	11	AArch64: initialize memory allocated for locals according to Windows AArch64 stack page growth requirement in template interpreter	PSU
JDK-8265335	11	Epsilon: Minor typo in EpsilonElasticTLABDecay description	PSU
JDK-8265238	8	[8u] [macos] build failure in OpenJDK8u after JDK-8211301 in older xcode	PSU
JDK-8265231	15, 11	(fc) ReadDirect and WriteDirect tests fail after fix for JDK-8264821	PSU
JDK-8265132	11	C2 compilation fails with assert "missing precedence edge"	PSU
JDK-8264848	15	[macos] libjvm.dylib linker warning due to macOS version mismatch	PSU
JDK-8264752	11, 8	SIGFPE crash with option FlightRecorderOptions:threadbuffersize=30M	PSU
JDK-8264016	11	[JVMCI] add some thread local fields for use by JVMCI	PSU
JDK-8263776	11	[JVMCI] add helper to perform Java upcalls	PSU
JDK-8263667	11	Avoid running GitHub actions on branches named pr/*	PSU
JDK-8263531	17, 11	Remove unused buffer int	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8263490	11	[macos] Crash occurs on JPasswordField with activated InputMethod	PSU
JDK-8263432	11	javac may report an invalid package/class clash on case insensitive filesystems	PSU
JDK-8263382	11, 8	java/util/logging/ParentLoggersTest.java failed with "checkLoggers: getLoggerNames() returned unexpected loggers"	PSU
JDK-8263361	13	Incorrect arraycopy stub selected by C2 for SATB collectors	PSU
JDK-8263311	8	Watch registry changes for remote printers update instead of polling	PSU
JDK-8263227	11	C2: inconsistent spilling due to dead nodes in exception block	PSU
JDK-8263136	11	C4530 was reported from VS 2019 at access bridge	PSU
JDK-8262862	11	Harden tests sun/security/x509/URICertStore/ExtensionsWithL DAP.java and krb5/canonicalize/Test.java	PSU
JDK-8262829	8	Native crash in Win32PrintServiceLookup.getAllPrinterNames()	PSU
JDK-8262731	17	[macOS] Exception from "Printable.print" is swallowed during "PrinterJob.print"	PSU
JDK-8262470	11	Printed GlyphVector outline with low DPI has bad quality on Windows	PSU
JDK-8262409	11	sun/security/ssl/SSLSocketImpl/SSLSocketImplTh rowsWrongExceptions. SSL test failures caused by java failed with "Server reported the wrong exception"	PSU
JDK-8262392	15, 13, 11	Update Mesa 3-D Headers to version 21.0.3	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8262017	11	C2: assert(n != __null) failed: Bad immediate dominator info.	PSU
JDK-8262000	11, 8	jdk/jfr/event/gc/detailed/TestPromotionFailedEventWithParallelScavenge.java failed with "OutOfMemoryError: Java heap space"	PSU
JDK-8261846	11	[JVMCI] c2v_iterateFrames can get out of sync with the StackFrameStream	PSU
JDK-8261652	11	Remove some dead comments from os_bsd_x86	PSU
JDK-8261496	11	Shenandoah: reconsider pacing updates memory ordering	PSU
JDK-8261397	8	try catch Method failing to work when dividing an integer by 0	PSU
JDK-8261238	11	NMT should not limit baselining by size threshold	PSU
JDK-8261236	15, 13	C2: ClhsdbJstackXcompStress test fails when StressGCM is enabled	PSU
JDK-8261147	11	C2: Node is wrongly marked as reduction resulting in a wrong execution due to wrong vector instructions	PSU
JDK-8261109	15, 13	[macOS] Remove disabled warning for JNF in make/autoconf/flags-cflags.m4	PSU
JDK-8261088	17	Repeatable annotations without @Target cannot have containers that target module declarations	PSU
JDK-8261072	11	AArch64: Fix MacroAssembler::get_thread convention	PSU
JDK-8260923	11	Add more tests for SSLSocket input/output shutdown	PSU
JDK-8260704	15, 13	ParallelGC: oldgen expansion needs release-store for _end	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8260589	11	Crash in JfrTraceldLoadBarrier::load(_jclass*)	PSU
JDK-8260460	11	GitHub actions still fail on Linux x86_32 with "Could not configure libc6:i386"	PSU
JDK-8259924	11	GitHub actions fail on Linux x86_32 with "Could not configure libc6:i386"	PSU
JDK-8259679	11	GitHub actions should use MSVC 14.28	PSU
JDK-8259535	11	ECDSA SignatureValue do not always have the specified length	PSU
JDK-8259271	15, 13	gc/parallel/TestDynShrinkHeap.java still fails "assert(covered_region.contains(new_memregion)) failed: new region is not in covered_region"	PSU
JDK-8258753	15	StartTlsResponse.close() hangs due to synchronization issues	PSU
JDK-8258703	11	Incorrect 512-bit vector registers restore on x86_32	PSU
JDK-8258373	15, 13	Update the text handling in the JPasswordField	PSU
JDK-8257999	15, 13	Parallel GC crash in gc/parallel/TestDynShrinkHeap.java: new region is not in covered_region	PSU
JDK-8257913	11	Add more known library locations to simplify Linux cross-compilation	PSU
JDK-8257620	15, 13, 11	Do not use objc_msgSend_stret to get macOS version	PSU
JDK-8257497	11	Update keytool to create AKID from the SKID of the issuing certificate as specified by RFC 5280	PSU
JDK-8257148	11	Remove obsolete code in AWTView.m	PSU
JDK-8257056	11	Submit workflow should apt-get update to avoid package installation errors	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8256747	11	GitHub Actions: decouple the hotspot build-only jobs from Linux x64 testing	PSU
JDK-8256414	11	add optimized build to submit workflow	PSU
JDK-8256393	11	Github Actions build on Linux should define OS and GCC versions	PSU
JDK-8256354	11	Github Action build on Windows should define OS and MSVC versions	PSU
JDK-8256277	11	Github Action build on macOS should define OS and Xcode versions	PSU
JDK-8256267	11	Relax compiler/floatingpoint/NaNTest.java for x86_32 and lower -XX:+UseSSE	PSU
JDK-8256215	11	Shenandoah: re-organize saving/restoring machine state in assembler code	PSU
JDK-8256127	11	Add cross-compiled foreign architectures builds to submit workflow	PSU
JDK-8255895	11	Submit workflow artifacts miss hs_errs/replays due to ZIP include mismatch	PSU
JDK-8255810	11	Zero: build fails without JVMTI	PSU
JDK-8255790	11	GTKL&F: Java 16 crashes on initialising GTKL&F on Manjaro Linux	PSU
JDK-8255718	11	Zero: VM should know it runs in interpreter-only mode	PSU
JDK-8255452	11	Doing GC during JVMTI MethodExit event posting breaks return oop	PSU
JDK-8255373	11	Submit workflow artifact name is always "test-results_.zip"	PSU
JDK-8255352	11	Archive important test outputs in submit workflow	PSU
JDK-8255305	11	Add Linux x86_32 tier1 to submit workflow	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8255255	11	Update Apache Santuario (XML Signature) to version 2.2.1	PSU
JDK-8254850	11	Update terminology in java.awt.GridBagLayout source code comments	PSU
JDK-8254631	15, 13	Better support ALPN byte wire values in SunJSSE	PSU
JDK-8254282	11	Add Linux x86_32 builds to submit workflow	PSU
JDK-8254270	11	linux 32 bit build doesn't compile libjdwpl/log_messages.c	PSU
JDK-8254244	11	Some code emitted by TemplateTable::branch is unused when running TieredCompilation	PSU
JDK-8254175	11	Build no-pch configuration in debug mode for submit checks	PSU
JDK-8254173	11	Add Zero, Minimal hotspot targets to submit workflow	PSU
JDK-8254054	11	Pre-submit testing using GitHub Actions should not use the deprecated set-env command	PSU
JDK-8254024	11	Enhance native libs for AWT and Swing to work with GraalVM Native Image	PSU
JDK-8253899	13, 11	Make IsClassUnloadingEnabled signature match specification	PSU
JDK-8253865	11	Pre-submit testing using GitHub Actions does not detect failures reliably	PSU
JDK-8253631	11	Remove unimplemented CompileBroker methods after JEP-165	PSU
JDK-8253424	11	Add support for running pre-submit testing using GitHub Actions	PSU
JDK-8253048	11	AArch64: When CallLeaf, no need to preserve callee-saved registers in caller	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8252857	11	AArch64: Shenandoah C1 CAS is not sequentially consistent	PSU
JDK-8252853	11	AArch64: gc/shenandoah/TestVerifyJCStress.java fails intermittently with C1	PSU
JDK-8252825	11	Add automated test for fix done in JDK-8218479	PSU
JDK-8252648	11	Shenandoah: name gang tasks consistently	PSU
JDK-8252194	11	Add automated test for fix done in JDK-8218469	PSU
JDK-8251945	11	SIGSEGV in PackageEntry::purge_qualified_exports()	PSU
JDK-8251930	11	AArch64: Native types mismatch in hotspot	PSU
JDK-8251549	11	Update docs on building for Git	PSU
JDK-8251361	11	Potential race between Logger configuration and GCs in HttpURLConWithProxy test	PSU
JDK-8251254	11	Add automated test for fix done in JDK-8218472	PSU
JDK-8251252	11	Add automated testcase for fix done in JDK-8214253	PSU
JDK-8251166	11	Add automated testcases for changes done in JDK-8214112	PSU
JDK-8250588	11	Shenandoah: LRB needs to save/restore fp registers for runtime call	PSU
JDK-8249773	11	Upgrade ReceiveISA.java test to be resilient to failure due to stray packets and interference	PSU
JDK-8249588	15	libwindowsaccessbridge issues on 64bit Windows	PSU
JDK-8249548	11	backward focus traversal gets stuck in button group	PSU
JDK-8249095	11	tools/javac/launcher/SourceLauncherTest.java fails on Windows	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8248901	8	Signed immediate support in ... /share/assembler.hpp is broken.	PSU
JDK-8248899	17	security/infra/java/security/cert/CertPathValidator /certification/QuoVadisCA.java fails, Certificate has been revoked	PSU
JDK-8248816	11	C1: Fix signature conflict in LIRGenerator::strength_reduce_multiply	PSU
JDK-8248682	11	AArch64: Use ATTRIBUTE_ALIGNED helper	PSU
JDK-8248671	11	AArch64: Remove unused variables	PSU
JDK-8248668	11	AArch64: Avoid MIN/MAX macros when using MSVC	PSU
JDK-8248666	11	AArch64: Use THREAD_LOCAL instead of __thread	PSU
JDK-8248657	11	Windows: strengthening in ThreadCritical regarding memory model	PSU
JDK-8248403	11	AArch64: Remove uses of kernel integer types	PSU
JDK-8248352	11	[TEST_BUG] Test test/jdk/java/awt/font/TextLayout/ArabicDiacritic Test.java can leave frame open	PSU
JDK-8247469	11, 8	getSystemCpuLoad() returns -1 on linux when some offline cpus are present and cpuset.effective_cpus is not available	PSU
JDK-8247421	11	[TESTBUG] ReturnBlobToWrongHeapTest.java failed allocating blob	PSU
JDK-8246387	11	switch to jreg 5.1	PSU
JDK-8246261	11	TCKLocalTime.java failed due to "AssertionError: expected [18:14:22] but found [18:14:23]"	PSU
JDK-8245134	11	test/lib/jdk/test/lib/security/KeyStoreUtils.java should allow to specify aliases	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8244973	11	serviceability/attach/RemovingUnixDomainSocket Test.java fails "stderr was not empty"	PSU
JDK-8244154	8	Update SunPKCS11 provider with PKCS11 v3.0 header files	PSU
JDK-8243543	17	jtreg test security/infra/java/security/cert/CertPathValidator /certification/BuypassCA.java fails	PSU
JDK-8241888	13	Mirror jdk.security.allowNonCaAnchor system property with a security one	PSU
JDK-8241768	11	git needs .gitattributes	PSU
JDK-8241353	11	NPE in ToolProvider.getSystemJavaCompiler	PSU
JDK-8241336	11	Some java.net tests failed with NoRouteToHostException on MacOS with special network configuration	PSU
JDK-8240983	11	Incorrect copyright header in Apache Santuario 2.1.3 files	PSU
JDK-8240555	11	Using env of JAVA_TOOL_OPTIONS and _JAVA_OPTIONS breaks QuietOption.java test	PSU
JDK-8240518	8	Incorrect JNU_ReleaseStringPlatformChars in Windows Print	PSU
JDK-8238943	11	switch to jtreg 5.0	PSU
JDK-8238567	8	SoftMainMixer.processAudioBuffers(): Wrong handling of stoppedMixers	PSU
JDK-8237495	8	Java MIDI fails with a dereferenced memory error when asked to send a raw 0xF7	PSU
JDK-8236671	11	NullPointerException in JKS keystore	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8236413	11	AbstractConnectTimeout should tolerate both NoRouteToHostException and UnresolvedAddressException	PSU
JDK-8236111	11	narrow allowSmartActionArgs disabling	PSU
JDK-8235866	11	bump jtreg requiredVersion to 4.2b16	PSU
JDK-8235216	11	typo in test filename	PSU
JDK-8235211	11	serviceability/attach/RemovingUnixDomainSocket Test.java fails with AttachNotSupportedException: Unable to open socket file	PSU
JDK-8234510	11	Remove file seeking requirement for writing a heap dump	PSU
JDK-8233989	11	Create an IPv4 version of java/net/MulticastSocket/SetLoopbackMode.java	PSU
JDK-8233790	11	Forward output from heap dumper to jcmd/jmap	PSU
JDK-8232782	11	Shenandoah: streamline post-LRB CAS barrier (aarch64)	PSU
JDK-8232243	11	Wrong caret position in JTextPane on Windows with a screen resolution > 100%	PSU
JDK-8231717	11	Improve performance of charset decoding when charset is always compactable	PSU
JDK-8230841	11	Remove oopDesc::equals()	PSU
JDK-8230808	11	Remove Access::equals()	PSU
JDK-8230674	11	Heap dumps should exclude dormant CDS archived objects of unloaded classes	PSU
JDK-8229254	13	solaris_x64 build fails after JDK-8191278	PSU
JDK-8227815	11	Minimal VM: set_state is not a member of AttachListener	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8227766	11	CheckUnhandledOops is broken in MemAllocator	PSU
JDK-8227738	11	jvmti/DataDumpRequest/datadumpreq001 failed due to "exit code is 134"	PSU
JDK-8227275	11	Within native OOM error handling, assertions may hang the process	PSU
JDK-8226878	13	zero crashes after JDK-8191278	PSU
JDK-8226871	13	invalid use of incomplete type class MacroAssembler when building minimal after JDK-8191278	PSU
JDK-8226683	11	Remove review suggestion from fix to 8219804	PSU
JDK-8226602	11	Test convenience reactive primitives from java.net.http with RS TCK	PSU
JDK-8226533	11	JVMCI: findUniqueConcreteMethod should handle statically bindable methods directly	PSU
JDK-8225790	11	Two NestedDialogs tests fail on Ubuntu	PSU
JDK-8225690	11	Multiple AttachListener threads can be created	PSU
JDK-8225583	11	Examine the HttpResponse.BodySubscribers for null handling and multiple subscriptions	PSU
JDK-8225083	17	Remove Google certificate that is expiring in December 2021	PSU
JDK-8225082	17, 11	Remove IdenTrust certificate that is expiring in September 2021	PSU
JDK-8224853	11	CDS address sanitizer errors	PSU
JDK-8223050	11	JVMCI: findUniqueConcreteMethod() should not use Dependencies::find_unique_concrete_method() for non-virtual methods	PSU
JDK-8221988	11	add possibility to build with Visual Studio 2019	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8220786	8	Create new switch to redirect error reporting output to stdout or stderr	PSU
JDK-8220445	11	Support for side by side MSVC Toolset versions	PSU
JDK-8219804	11	java/net/MulticastSocket/Promiscuous.java fails intermittently due to NumberFormatException	PSU
JDK-8219552	11	bump jtreg requiredVersion to b14 in test/jdk/sanity/client/	PSU
JDK-8219417	11	bump jtreg requiredVersion to b14	PSU
JDK-8218145	11	block_if_requested is not proper inlined due to size	PSU
JDK-8217879	11	hs_err should print more instructions in hex dump	PSU
JDK-8217825	11	Verify @AfterTest is used correctly in WebSocket tests	PSU
JDK-8216532	11	tools/launcher/Test7029048.java fails (Solaris)	PSU
JDK-8215712	13	Parsing extension failure may alert decode_error	PSU
JDK-8214937	11	sun/security/tools/jarsigner/warnings/NoTimestampTest.java failed due to unexpected expiration date	PSU
JDK-8214520	11	[TEST_BUG] sun/security/mscapi/nonUniqueAliases/NonUniqueAliases.java failed with incorrect jtreg tags order	PSU
JDK-8214418	8	half-closed SSL Engine status may cause application dead loop	PSU
JDK-8214195	11	Align stdout messages in test/jdk/java/math/BigInteger/PrimitiveConversionTests.java	PSU
JDK-8213922	11	fix ctw stand-alone build	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8213718	11	[TEST] Wrong classname in vmTestbase/nsk/stress/except/except002 and except003	PSU
JDK-8213694	11	Test Timeout.java should run in othervm mode	PSU
JDK-8213576	11	Make test AsyncCloseChannel.java run in othervm	PSU
JDK-8213409	11	Refactor sun.text.IntHashtable:i18n shell tests to plain java tests	PSU
JDK-8213235	11	java/nio/channels/SocketChannel/AsyncCloseChannel.java fails with threads that didn't exit	PSU
JDK-8213137	11	Remove static initialization of monitor/mutex instances	PSU
JDK-8213007	11	Update the link in test/jdk/sun/security/provider/SecureRandom/DrbgCavp.java	PSU
JDK-8212718	11	Refactor some annotation processor tests to better use collections	PSU
JDK-8212695	11	Add explicit timeout to several HTTP Client tests	PSU
JDK-8212040	11	Compilation error due to wrong usage of NSPrintJobDispositionValue in mac10.12	PSU
JDK-8211325	11	test/jdk/java/net/Socket/LingerTest.java fails with cleaning up	PSU
JDK-8211227	15	Inconsistent TLS protocol version in debug output	PSU
JDK-8211092	11	test/jdk/sun/net/www/http/HttpClient/MultiThreadTest.java fails intermittently when cleaning up	PSU
JDK-8211055	11	Provide print to a file (PDF) feature even when printer was not connected	PSU
JDK-8210959	11	JShell fails and exits when statement throws an exception whose message contains a '%'	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8210934	11	Move sun/net/www/protocol/http/GetErrorStream.java to OpenJDK	PSU
JDK-8210908	11	Refactor java/util/prefs/PrefsSpi.sh to plain java test	PSU
JDK-8210819	11	Update the host name in CNameTest.java	PSU
JDK-8210802	11	temp files left by tests in jdk/java/net/httpclient	PSU
JDK-8210669	11	Some launcher tests assume a pre-JDK 9 run-time image layout	PSU
JDK-8210495	11	Compiler crashes because of illegal signature in otherwise legal code	PSU
JDK-8210407	11	Refactor java.util.Calendar:i18n shell tests to plain java tests	PSU
JDK-8210406	11	Refactor java.util.PluggableLocale:i18n shell tests to plain java tests	PSU
JDK-8210058	8	Algorithmic Italic font leans opposite angle in Printing	PSU
JDK-8209930	11	Refactor java/util/zip/ZipFile/deletetempjar.sh to plain java test	PSU
JDK-8209832	11	Refactor jdk/internal/reflect/Reflection/GetCallerClassTest.sh to plain java test	PSU
JDK-8209773	11	Refactor shell test javax/naming/module/basic.sh to java	PSU
JDK-8209772	11	Refactor shell test java/util/ServiceLoader/basic/basic.sh to java	PSU
JDK-8209768	11	Refactor java/util/prefs/CheckUserPrefsStorage.sh to plain java test	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8209380	11	ARM: cleanup maybe-uninitialized and reorder compiler warnings	PSU
JDK-8208363	11	test/jdk/java/lang/Package/PackageFromManifest.java missing module dependencies declaration	PSU
JDK-8208227	11	tools/jdeps/DotFileTest.java fails on Win-X64	PSU
JDK-8207316	11	java/nio/channels/spi/SelectorProvider/inheritedChannel/InheritedChannelTest.java failed	PSU
JDK-8206925	13	Support the certificate_authorities extension	PSU
JDK-8206350	11	java/util/Locale/bcp47u/SystemPropertyTests.java failed on Mac 10.13 with zh_CN and zh_TW locales.	PSU
JDK-8206083	11	Make tools/javac/api/T6265137.java robust to JDK version changes	PSU
JDK-8199931	11	java/net/MulticastSocket/UnreferencedMulticastSockets.java fails with "incorrect data received"	PSU
JDK-8196181	8	sun/java2d/GdiRendering/InsetClipping.java fails	PSU
JDK-8196092	11	javax/swing/JComboBox/8032878/bug8032878.java fails	PSU
JDK-8194246	8	JVM crashes when calling getStackTrace if stack contains a method that is a member of a very large class	PSU
JDK-8194230	11	jdk/internal/jrtfs/remote/RemoteRuntimeImageTest.java fails with java.lang.NullPointerException	PSU
JDK-8193214	11	Incorrect annotations.without.processors warnings with JDK 9	PSU
JDK-8191278	13	MappedByteBuffer bulk access memory failures are not handled gracefully	PSU
JDK-8181313	11	SA: Remove libthread_db dependency on Linux	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8176837	8	SunPKCS11 provider needs to check more details on PKCS11 Mechanism	PSU
JDK-8172404	13	Tools should warn if weak algorithms are used before restricting them	PSU
JDK-8170467	8	(reflect) Optimize SignatureParser's use of StringBuilders	PSU
JDK-8169246	11	java/net/DatagramSocket/ReportSocketClosed.java fails intermittently with BindException	PSU
JDK-8168304	11	Make all of DependencyContext_test available in product mode	PSU
JDK-8166673	8	The new implementation of Robot.waitForIdle() may hang	PSU
JDK-8158066	11	SourceDebugExtensionTest fails to rename file	PSU
JDK-8156584	8	Initialization race in sun.security.x509.AlgorithmId.get	PSU
JDK-8134989	8	java/net/MulticastSocket/TestInterfaces.java failed due to unexpected IP address	PSU
JDK-8134869	8	AARCH64: GHASH intrinsic is not optimal	PSU
JDK-8131062	8	aarch64: add support for GHASH acceleration	PSU
JDK-8086003	8	Test fails on OSX with java.lang.RuntimeException 'Narrow class base: 0x0000000000000000, Narrow class shift: 3' missing	PSU
JDK-8080082	8	configure fails if you create an empty directory and then run configure from it	PSU
JDK-8079891	8	Store configure log in \$BUILD/configure.log	PSU
JDK-8072767	8	DefaultCellEditor for comboBox creates ActionEvent with wrong source object	PSU
JDK-8065215	8	Print warning summary at end of configure	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8054118	8	java/net/ipv6tests/UdpTest.java failed intermittently	PSU
JDK-8042902	11	Test java/net/Inet6Address/serialize/Inet6AddressSerializationTest.java fails intermittently	PSU
JDK-8042557	8	compiler/uncommontrap/TestSpecTrapClassUnloading.java fails with: GC triggered before VM initialization completed	PSU
JDK-8035424	8	Performance problem in sun.reflect.generics.parser.SignatureParser	PSU
JDK-8027154	8	[TESTBUG] Test java/awt/Mouse/GetMousePositionTest/GetMousePositionWithPopup.java fails	PSU
JDK-8024368	11	private methods are allocated vtable indices	PSU
JDK-8004148	8	NPE in sun.awt.SunToolkit.getWindowDeactivationTime	PSU
JDK-7146776	8	Deadlock between URLConnectionHandler.getHostAddress and file.Handler.openConnection	PSU
JDK-6847157	8	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-8269163	17, 15, 8	Upgrade GStreamer library	CPU
JDK-8269157	17, 15, 8	Upgrade libxml2 to latest	CPU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8269147	17, 15, 8	Update GStreamer to version 1.18.4	CPU
JDK-8269131	17, 15, 8	Update libxml2 to version 2.9.12	CPU
JDK-8274107	17, 8	Cherry pick GTK WebKit 2.32.4 changes	PSU
JDK-8273754	17	Re-introduce Automatic-Module-Name in empty jars	PSU
JDK-8273732	17	Clarify review policies for clean backports in JavaFX update releases	PSU
JDK-8273324	17	IllegalArgumentException: fromIndex(0) > toIndex(-1) after clear and select TableCell	PSU
JDK-8273280	17	Update README.md and CONTRIBUTING.md for jfx17u	PSU
JDK-8273138	17	BidirectionalBinding fails to observe changes of invalid properties	PSU
JDK-8272329	17, 8	Cherry pick GTK WebKit 2.32.3 changes	PSU
JDK-8271230	8	Remove obsolete test classes and data files from 3DViewer sample	PSU
JDK-8270479	17, 8	WebKit 612.1 build fails with Visual Studio 2017	PSU
JDK-8269374	17	Menu inoperable after setting stage to second monitor	PSU
JDK-8268915	8	WebKit build fails with Xcode 12.5	PSU
JDK-8268849	17, 8	Update to 612.1 version of WebKit	PSU
JDK-8268718	17, 8	[macos] Video stops, but audio continues to play when stopTime is reached	PSU
JDK-8268219	8	hlsprogressbuffer should provide PTS after GStreamer update	PSU
JDK-8267858	8	Document that title property in WebEngine gets updated asynchronously	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
JDK-8267819	8	CoInitialize/CoUninitialize should be called on same thread	PSU
JDK-8267121	8	Illegal access to private "size" field of ArrayList from build.gradle	PSU
JDK-8266860	8	[macos] Incorrect duration reported for HLS live streams	PSU
JDK-8266516	8	One label typo in the properties for bi-directional text	PSU
JDK-8265400	8	Update to gcc 10.3 on Linux	PSU
JDK-8265399	8	Update to Visual Studio 2019 version 16.9.3	PSU
JDK-8264928	8	Update to Xcode 12.4	PSU
JDK-8264737	8	JavaFX media stream stops playing after reconnecting via Remote Desktop	PSU
JDK-8262396	8	Update Mesa 3-D Headers to version 21.0.3	PSU
JDK-8246357	8	Allow static build of webkit library on linux	PSU
JDK-8231558	8	[macos] Platform.exit causes assertion error on macOS 10.15 or later	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-29759	11, 8	Update OpenJSSE & Legacy8uJSSE versions	CPU
ZULU-29535	8, 7	sun/rmi/transport/tcp/DisableRMIOverHttp/DisableRMIOverHTTPTest.java failed: connection refused	CPU
ZULU-28578	11	Performance issue with LoginContext.login() method in multithreading	CPU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-28574	8	libfreetype.so symlink is not created for linux64	CPU
ZULU-30245	17	Revert ZULU-28759	PSU
ZULU-30162	8	Update JFX to zulu8u312-b01	PSU
ZULU-30054	17, 15, 13, 11	Update JFX to zulu17.0.1+101	PSU
ZULU-29785	8	Change providers priority in the BCFIPS configuration	PSU
ZULU-29568	13	crash on macarm after fix for JDK-8191278	PSU
ZULU-29511	8	arm32hf build failed after JDK-8248901	PSU
ZULU-29447	8	Allow VM thread scheduler type change	PSU
ZULU-29440	8	Allow GC thread scheduler type change	PSU
ZULU-29439	8	Print thread scheduler on thread dump request	PSU
ZULU-28874	15	Missing whitespace in Welcome.html in 15.34+1005-bpr	PSU
ZULU-28868	8	JBoss EAP 7.4 hangs with Zulu8	PSU
ZULU-28581	8	Control native thread timeout	PSU
ZULU-28580	8	Fix native threads check print and exit logic	PSU
ZULU-28579	8	Do not attach JNI thread on checkpoint	PSU
ZULU-28575	8	Upgrade BC-FIPS to version 1.0.2.1	PSU
ZULU-28360	17, 15, 13, 11, 8, 7, 6	rpm/deb package description should use https paths instead of http	PSU
ZULU-27961	11	Backout JDK-8208671	PSU
ZULU-27960	11	Backout JDK-8207778	PSU
ZULU-27959	11	Backout JDK-8202578	PSU
ZULU-27958	11	Backout JDK-8216995	PSU
ZULU-27900	11	Backout JDK-8208677	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-27899	11	Backout JDK-8209378	PSU
ZULU-27898	11	Backout JDK-8209821	PSU
ZULU-27897	11	Backout JDK-8210155	PSU
ZULU-27896	11	Backout JDK-8210422	PSU
ZULU-27895	11	Backout ZULU-18668	PSU
ZULU-27894	11	Backout JDK-8209447	PSU
ZULU-27643	11	test org/openjsse/sun/security/ssl/SSLSocketImpl/NotifyHandshakeTest.sh failed	PSU
ZULU-26858	11	Missing fixes in aarch32	PSU
ZULU-26656	11	Crash: Internal Error in shenandoahHeapRegion.cpp:574 - guarantee(RegionCount >= MIN_NUM_REGIONS)	PSU
ZULU-25391	8	Add diagnostic option to print thread info	PSU
ZULU-21167	8	Freetype: provide option to override angle for algorithmic italic	PSU

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