



## Azul Zulu builds of OpenJDK

April 2023 Quarterly Update

Release Notes

Revision 1.6

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## Revision History

Revision	Date	Description
0.1	April 18, 2023	Initial version of the document.
0.2	April 18, 2023	AVD info added to "What's New".
0.3	April 18, 2023	Added bugfixes lists.
0.4	April 18, 2023	Added CRaC only for version 17 on Linux/x64.
0.5	April 18, 2023	Added detailed version numbers.
1.0	April 18, 2023	Added CVE list.
1.1	April 20, 2023	Updated component for CVE-2023-21986.
1.2	April 26, 2023	Added Amazon Linux 2023 to supported platforms.
1.3	April 28, 2023	Added 8.70.0.26 and additional Bug Fixes Specific to Azul Zulu Builds of OpenJDK.
1.4	May 15, 2023	Added Zulu Fixes for CRaC.
1.5	May 22, 2023	Added "Changed Install Paths for RPM-based Linux".
1.6	May 22, 2023	Updated CRaC available on Linux/x64 and Linux/Arm64.

## Release Details

This release is a quarterly update release for Azul Zulu Builds of OpenJDK version 20, 17, 11, 8, 7, and 6. The following table lists detailed information on the Azul Zulu versions released with the current update.

Azul Zulu Version*	Update Type**	JDK Version	Based on		JavaFX Version
			Azul Zulu Version	JDK Version	
20.30.11 (CA) 20.30.12 (SA)	PSU	20.0.1+9	20.28	20+103	20.0.1+101
17.41.14 (SA)	CPU	17.0.6.0.101+2	17.40	17.0.6+10	19.0.2.1.101+100

17.42.19 (CA) 17.42.20 (SA)	PSU	17.0.7+7	17.41	17.0.6.0.101+2	20.0.1+101
11.63.16 (SA)	CPU	11.0.18.0.101+3	11.62	11.0.18+10	19.0.2.1.101+100
11.64.19 (CA) 11.64.20 (SA)	PSU	11.0.19+7	11.63	11.0.18.0.101+3	19.0.3+102
8.69.0.16 (SA)	CPU	8u371-b03	8.68	8u362-b09	8u371-b01
8.70.0.23 (CA) 8.70.0.24 (SA) 8.70.0.26 (SA)	PSU	8u372-b05	8.69	8u371-b03	8u372-b02
7.61.0.18 (SA)	CPU	7u381-b03	7.59	7u371-b03	N/A
6.55.0.12 (SA)	CPU	6b155	6.53	6b153	N/A

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

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

#### NOTE

Both SA and CA distributions may contain Early Access builds noted with `-ea-` in their filename. Early Access builds may not be TCK certified.

\*\* Update type:

- **CPU** (Critical Patch Updates) contain fixes to security vulnerabilities and critical bug fixes. Azul Zulu CPU releases are generally based on prior-cycle PSU releases, with only security fixes applied. They provide a low-risk vehicle for the potentially urgent deployment of security fixes when issues of sufficient severity arise. CPU releases are available in SA distributions.

- **PSU** (Patch Set Updates) incorporates all fixes in the corresponding CPU, as well as additional non-security bug fixes. Azul Zulu PSU releases incorporate both security fixes and other changes that align the release contents with the associated OpenJDK project quarterly release. PSU releases are available in SA and CA distributions.

## What's New

### Available Versions

**Azul Zulu for Java 20** is included in this release, while Azul Zulu for Java 13 (after 3.5 years), Java 15 (after 2.5 years), and Java 19 (after 6 months) are no longer provided, as specified in the [Azul Support Roadmap](#).

These versions, which are not Long-Term Support (LTS) versions, guarantee the evolution of the OpenJDK system and provide developers and DevOps teams the opportunity to use and test new features in OpenJDK. Although non-LTS versions can be used in production, LTS versions are typically used in production environments. Azul Zulu for the next LTS, Java 21, will be released in September 2023. If you're interested in more information about this topic, we recommend checking out [the community podcast](#) where the changes included in OpenJDK 20 and the release process of the OpenJDK project are discussed.

If you're still using any of these versions that are no longer provided, we can help you if issues would arise! Please email us at [support@azul.com](mailto:support@azul.com).

### CRaC Included

Starting with the April 2023 release, support for **Coordinated Restore at Checkpoint (CRaC)** is included with some of the Azul Zulu Builds of OpenJDK. CRaC support facilitates the capture of an application checkpoint image, and the fast startup of an application from a previously check-pointed image.

**NOTE**

Only the bundles with `-crac-` in the name include CRaC functionality. Currently, CRaC is only available on Linux/x64 and Linux/Arm64, in version 17 of Azul Zulu Builds of OpenJDK.

## Azul Vulnerability Detection Improvements

Several improvements in the [Connected Runtime Service \(CRS\)](#) that allows to detect components and communicate with the [Azul Vulnerability Detection Forwarder](#):

- Recover the first method-level tracing at the JVM level.
- CRS flags are no longer marked as experimental.
- Configurable disk and memory use.
- Improved performance metrics.
- Use of JAR manifest files and metadata to identify components.

## New Property

In this release, a new property is introduced:

- `swing.html.object`: if set to `true`, there will be an attempt to always render HTML object tags embedded in Swing HTML components, in the same way an unpatched JDK works now. The default value is `false`.

## Changed Install Paths for RPM-based Linux

To satisfy the SELinux policy, the Zulu RPM installation paths have changed in the following way:

- For RPM packages downloaded from [Azul Downloads](#):
  - JDK package changed from `/usr/lib/jvm/zulu-<major_version>` to `/usr/lib/jvm/java-<major_version>-zulu-openjdk-jdk`.
  - JRE package changed from `/usr/lib/jvm/zre-<major_version>` to `/usr/lib/jvm/java-<major_version>-zulu-openjdk-jre`.

- For Zulu packages installed from Azul RPM repository, changed from

`/usr/lib/jvm/zulu<major_version>-ca` to `/usr/lib/jvm/java-<major_version>-zulu-openjdk-ca`.

For compatibility, new RPMs create symlinks from the old installation paths pointing to the new installation paths. For example for Zulu 11:

```
# JDK packages
/usr/lib/jvm/zulu-11 -> /usr/lib/jvm/java-11-zulu-openjdk-jdk

# JRE packages
/usr/lib/jvm/zre-11 -> /usr/lib/jvm/java-11-zulu-openjdk-jre

# Layered packages from RPM repository
/usr/lib/jvm/zulu11 -> zulu11-ca
/usr/lib/jvm/zulu11-ca -> /usr/lib/jvm/java-11-zulu-openjdk-ca
```

## Impact on RPM Downgrades

An RPM downgrade from any modified RPM version (e.g. zulu11.63) to any old RPM version (zulu11.62 or earlier) will not work properly. To downgrade, uninstall the new version and then install the old version instead of a direct downgrade.

# Notice of Upcoming Changes

In the next release (July 2023), we plan to reduce the testing cycles for the following environments targeting their end of life:

- Windows Client 8.1
- Debian 9.x

If you're still using any of these, we will be providing Azul Platform Core versions for you and can help you if issues would arise! Please email us at [support@azul.com](mailto:support@azul.com).

## Known Issues

There are no new known issues to report in this release.

# IANA Time Zone Database version

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

## Supported Platforms

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

Operating System	Azul Zulu Version					
	6	7	8	11	17	20
<b>Windows (x86 32/64-bit)</b>						
Windows Server 2022	Yes	Yes	Yes	Yes	Yes	Yes
Windows Server 2019	Yes	Yes	Yes	Yes	Yes	Yes
Windows Server 2016	Yes	Yes	Yes	Yes	Yes	Yes
Windows Server 2012 R2	Yes	Yes	Yes	Yes	Yes	Yes
Windows 11	Yes	Yes	Yes	Yes	Yes	Yes
Windows 10	Yes	Yes	Yes	Yes	Yes	Yes
Windows 8.1	Yes	Yes	Yes	Yes	Yes	n/a
<b>Windows (ARM 64-bit)</b>						
Windows 11	n/a	n/a	n/a	n/a	Yes	n/a
Windows 10	n/a	n/a	n/a	n/a	Yes	n/a
<b>Linux (x86 32/64-bit)</b>						
RHEL 9.x	n/a	Yes	Yes	Yes	Yes	Yes
RHEL 8.x	Yes	Yes	Yes	Yes	Yes	Yes
RHEL 7.x	Yes	Yes	Yes	Yes	Yes	Yes
SLES 15	Yes	Yes	Yes	Yes	Yes	Yes
SLES 12	Yes	Yes	Yes	Yes	Yes	Yes



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

Debian 7 Wheezy [7]	n/a	n/a	Yes	Yes	n/a	n/a
Linux with kernel 3.10.x and glibc 2.9 [7]	n/a	n/a	Yes	Yes	n/a	n/a
Linux (MIPS 32-bit) [8]						
Linux with kernel 4.9.59 and glibc 2.9 [9]	n/a	n/a	Yes	n/a	n/a	n/a
Linux (PowerPC 64-bit Big Endian)						
Linux with kernel 3.8.13 and glibc 2.22 [10]	n/a	n/a	Yes	n/a	n/a	n/a
Linux (PowerPC 32-bit Hard-float and SPE)						
Linux with kernel 3.12.37 and glibc 2.20 [11]	n/a	n/a	Yes	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
MacOS (x86 64-bit)						
macOS 13	n/a	Yes	Yes	Yes	Yes	Yes
macOS 12	n/a	Yes	Yes	Yes	Yes	Yes
MacOS (Apple Silicon)						
macOS 13	n/a	n/a	Yes	Yes	Yes	Yes
macOS 12	n/a	n/a	Yes	Yes	Yes	Yes
Solaris (x86 and Sparc)						
Solaris 11	n/a	Yes	Yes	Yes	n/a	n/a
Solaris 10	n/a	Yes	Yes	n/a	n/a	n/a

1. Bundles with the Checkpoint/Restore (with the `criu` suffix) functionality require kernel 4.4.0+.
2. Bundles compiled with GCC 9 (with the `gcc9` suffix) require glibc 2.29.
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 CRaM (with the `cr` suffix) functionality require glibc 2.13.

5. Bundles with the C1 compiler will use FPU, if it is present and available, to speed up floating point operations. Bundles with both C1 and C2 compilers require FPU.
6. Bundles with the C1 compiler. Tested on ARMv5 hardware.
7. Bundles with the C1 compiler were tested on ARMv6 and ARMv7 hardware. Bundles with both C1 and C2 compilers were tested on ARMv7 hardware.
8. MIPS32r2 ISA, Big Endian, FPU in 32-bit mode or equivalent emulation.
9. Linux soft-float O32 MIPS ABI
10. Bundles for this platform were tested on QorIQ® T4240-RDB.
11. Hard-Float EABI bundles were tested on QorIQ® T1024RDB. SPE ABI bundles were tested on NXP® P2020RDB.

## 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
<a href="#">CVE-2023-21930</a>	JSSE	TLS	Yes	7.4	Network	High	None	None	Unchanged	High	High	None	20, 17, 11, 8	Note 1
<a href="#">CVE-2023-21954</a>	Hotspot	Multiple	Yes	5.9	Network	High	None	None	Unchanged	High	None	None	17, 11, 8, 7	Note 1
<a href="#">CVE-2023-21967</a>	JSSE	HTTPS	Yes	5.9	Network	High	None	None	Unchanged	None	None	High	20, 17, 11, 8, 7, 6	Note 1
<a href="#">CVE-2023-21939</a>	Swing	HTTP	Yes	5.3	Network	Low	None	None	Unchanged	None	Low	None	20, 17, 11, 8, 7, 6	Note 1
<a href="#">CVE-2023-21937</a>	Networking	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	Low	None	20, 17, 11, 8, 7, 6	Note 1
<a href="#">CVE-2023-21938</a>	Libraries	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	Low	None	20, 17, 11, 8, 7, 6	Note 2
<a href="#">CVE-2023-21968</a>	Libraries	Multiple	Yes	3.7	Network	High	None	None	Unchanged	None	Low	None	20, 17, 11, 8, 7	Note 1
<a href="#">CVE-2023-21986</a>	GraalVM Native Image	None	No	5.7	Local	Low	None	None	Changed	None	Low	Low	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 can also be exploited by using APIs in the specified Component, e.g., through a web service which supplies data to the APIs.
2	This vulnerability applies to Java deployments that load and run untrusted code (e.g., code that comes from the internet) and rely on the Java sandbox for security. This vulnerability does not apply to Java deployments, typically in servers, that load and run only trusted code (e.g., code installed by an administrator).

## Non-CVE Security Fixes

The following table summarizes non-CVE security fixes implemented in this release.

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8287404</a>	20, 17, 11, 8, 7, 6	Improve ping times	CPU,PSU
<a href="#">JDK-8303501</a>	20, 17, 11, 8	Unable to navigate to relative URLs after fix for JDK-8299781	CPU,PSU
<a href="#">JDK-8300060</a>	20, 17, 11, 8	Improved Webkit support	CPU,PSU
<a href="#">JDK-8299781</a>	20, 17, 11, 8	Improve JFX navigation	CPU,PSU
<a href="#">JDK-8299129</a>	20, 17, 11, 8, 7, 6	Enhance NameService lookups	CPU,PSU
<a href="#">JDK-8297371</a>	20, 17, 11, 8, 7, 6	Improve UTF8 representation redux	CPU,PSU
<a href="#">JDK-8292652</a>	8, 7, 6	Enhance macro allocation	CPU,PSU
<a href="#">JDK-8288436</a>	20, 17, 11, 8, 7, 6	Improve Xalan supports	CPU,PSU
<a href="#">JDK-8305113</a>	17, 11, 8, 7, 6	(tz) Update Timezone Data to 2023c	CPU,PSU

## OpenJDK Bug Fixes

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

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8305113</a>	17, 11, 8, 7, 6	(tz) Update Timezone Data to 2023c	CPU,PSU
<a href="#">JDK-8298310</a>	20, 17, 11, 8, 7, 6	Enhance TLS session negotiation	CPU,PSU
<a href="#">JDK-8296700</a>	8, 7, 6	Improve String platform support	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8288436</a>	20, 17, 11, 8, 7, 6	Improve Xalan supports	CPU,PSU
<a href="#">JDK-8296692</a>	20, 17, 11, 8, 7, 6	Improve String platform support	CPU,PSU
<a href="#">JDK-8296684</a>	20, 17, 11, 8, 7, 6	Improve String platform support	CPU,PSU
<a href="#">JDK-8296676</a>	20, 17, 11, 8, 7, 6	Improve String platform support	CPU,PSU
<a href="#">JDK-8299129</a>	20, 17, 11, 8, 7, 6	Enhance NameService lookups	CPU,PSU
<a href="#">JDK-8296957</a>	8, 7, 6	One more cast in SAFE_SIZE_NEW_ARRAY2	CPU,PSU
<a href="#">JDK-8298191</a>	17, 11	Enhance object reclamation process	CPU,PSU
<a href="#">JDK-8297371</a>	20, 17, 11, 8, 7, 6	Improve UTF8 representation redux	CPU,PSU
<a href="#">JDK-8298667</a>	20, 17, 11, 8, 7	Improved path handling	CPU,PSU
<a href="#">JDK-8292652</a>	8, 7, 6	Enhance macro allocation	CPU,PSU
<a href="#">JDK-8287404</a>	20, 17, 11, 8, 7, 6	Improve ping times	CPU,PSU
<a href="#">JDK-8295304</a>	20, 17, 11, 8, 7, 6	Runtime support improvements	CPU,PSU
<a href="#">JDK-8294474</a>	20, 17, 11, 8	Better AES support	CPU,PSU
<a href="#">JDK-8296496</a>	8, 7, 6	Overzealous check in sizcalc.h prevents large memory allocation	CPU,PSU
<a href="#">JDK-8296832</a>	20, 17, 11, 8, 7, 6	Improve Swing platform support	CPU,PSU
<a href="#">JDK-8301170</a>	17	perfMemory_windows.cpp add free_security_attr to early returns	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8301143</a>	8	[TESTBUG] jfr/event/sampling/TestNative was backported to JDK8u without proper native wrapper	PSU
<a href="#">JDK-8301123</a>	20	Enable Symbol refcounting underflow checks in PRODUCT	PSU
<a href="#">JDK-8300773</a>	17, 11	Address the inconsistency between the constant array and pool size	PSU
<a href="#">JDK-8300751</a>	17	[17u] Remove duplicate entry in javac.properties	PSU
<a href="#">JDK-8300742</a>	11	jstat's CGCT is 5 percent higher than the pause time in -Xlog:gc.	PSU
<a href="#">JDK-8300692</a>	17	GCC 12 reports some compiler warnings in bundled freetype	PSU
<a href="#">JDK-8300590</a>	17	[JVMCI] BytecodeFrame.equals is broken	PSU
<a href="#">JDK-8300424</a>	11	[11u] Chunk lost in backport of 8297569	PSU
<a href="#">JDK-8300266</a>	17	Detect Virtualization on Linux aarch64	PSU
<a href="#">JDK-8300205</a>	17	Swing test bug8078268 make latch timeout configurable	PSU
<a href="#">JDK-8300119</a>	17, 11, 8	CgroupMetrics.getTotalMemorySize0() can report invalid results on 32 bit systems	PSU
<a href="#">JDK-8300106</a>	17, 11, 8	Currency.getSymbol(Locale) returns incorrect symbol for en_SL and hr_HR	PSU
<a href="#">JDK-8300014</a>	8	Some backports placed the tests in the wrong location	PSU
<a href="#">JDK-8299970</a>	17	Speed up compiler/arraycopy/TestArrayCopyConjoint.java	PSU
<a href="#">JDK-8299957</a>	17	Enhance error logging in instrument coding with additional jplis_assert_msg	PSU
<a href="#">JDK-8299947</a>	20	Change milestone to fcs for all releases	PSU



OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8299804</a>	8	Fix non-portable code in hotspot shell tests in 8u	PSU
<a href="#">JDK-8299671</a>	17	Speed up compiler/intrinsics/string/TestStringLatin1IndexOfChar.java	PSU
<a href="#">JDK-8299657</a>	17	sun/tools/jhsdb/SAGetoptTest.java fails after 8299470	PSU
<a href="#">JDK-8299548</a>	8	Fix hotspot/test/runtime/Metaspace/MaxMetaspaceSizeTest.java in 8u	PSU
<a href="#">JDK-8299520</a>	17, 11	TestPrintXML.java output error messages in case compare fails	PSU
<a href="#">JDK-8299497</a>	17	Usage of constructors of primitive wrapper classes should be avoided in java.desktop API docs	PSU
<a href="#">JDK-8299470</a>	17	sun/jvm/hotspot/SALauncher.java handling of negative rmiport args	PSU
<a href="#">JDK-8299445</a>	11, 8	EndingDotHostname.java fails because of compilation errors	PSU
<a href="#">JDK-8299424</a>	17	containers/docker/TestMemoryWithCgroupV1.java fails on SLES12 ppc64le when testing Memory and Swap Limit	PSU
<a href="#">JDK-8299388</a>	17	java/util/regex/NegativeArraySize.java fails on Alpine and sometimes Windows	PSU
<a href="#">JDK-8299296</a>	17, 11	Write a test to verify the components selection sends ItemEvent	PSU
<a href="#">JDK-8299234</a>	11	JMX Repository.query performance	PSU
<a href="#">JDK-8299194</a>	20, 17, 11	CustomTzIDCheckDST.java may fail at future date	PSU
<a href="#">JDK-8299018</a>	17	java/net/httpclient/HttpsTunnelAuthTest.java fails with java.io.IOException: HTTP/1.1 header parser received no bytes	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8299015</a>	17	Ensure that HttpResponse.BodySubscribers.ofFile writes all bytes	PSU
<a href="#">JDK-8298947</a>	17	compiler/codecache/MHIntrinsicAllocFailureTest.java fails intermittently	PSU
<a href="#">JDK-8298726</a>	17	(fs) Change PollingWatchService to record last modified time as FileTime rather than milliseconds	PSU
<a href="#">JDK-8298649</a>	17	JFR: RemoteRecordingStream support for checkpoint event sizes beyond u4	PSU
<a href="#">JDK-8298588</a>	17, 11	WebSockets: HandshakeUrlEncodingTest unnecessarily depends on a response body	PSU
<a href="#">JDK-8298568</a>	17	Fastdebug build fails after JDK-8296389	PSU
<a href="#">JDK-8298472</a>	17	AArch64: Detect Ampere-1 and Ampere-1A CPUs and set default options	PSU
<a href="#">JDK-8298271</a>	17, 11	java/security/SignedJar/spi-calendar-provider/TestSPISigned.java failing on Windows	PSU
<a href="#">JDK-8298129</a>	17, 11	Let checkpoint event sizes grow beyond u4 limit	PSU
<a href="#">JDK-8298108</a>	17, 11	Add a regression test for JDK-8297684	PSU
<a href="#">JDK-8298093</a>	17, 11	improve cleanup and error handling of awt_parseColorModel in awt_parselImage.c	PSU
<a href="#">JDK-8298073</a>	17, 11	gc/metaspace/CompressedClassSpaceSizeInJmapHeap.java causes test task timeout on macosx	PSU
<a href="#">JDK-8298035</a>	17	Provide better descriptions for JIT compiler JFR events	PSU
<a href="#">JDK-8298027</a>	17, 11, 8	Remove SCCS id's from awt jtreg tests	PSU
<a href="#">JDK-8297959</a>	17	Provide better descriptions for some Operating System JFR events	PSU
<a href="#">JDK-8297951</a>	17, 11	C2: Create skeleton predicates for all If nodes in loop predication	PSU

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<a href="#">JDK-8297804</a>	17, 11, 8	(tz) Update Timezone Data to 2022g	PSU
<a href="#">JDK-8297642</a>	17	PhaseldealLoop::only_has_infinite_loops must detect all loops that never lead to termination	PSU
<a href="#">JDK-8297569</a>	17, 11	URLPermission constructor throws IllegalArgumentException: Invalid characters in hostname after JDK-8294378	PSU
<a href="#">JDK-8297523</a>	17	Various GetPrimitiveArrayCritical miss result - NULL check	PSU
<a href="#">JDK-8297489</a>	17, 11	Modify TextAreaTextEventTest.java as to verify the content change of TextComponent sends TextEvent	PSU
<a href="#">JDK-8297480</a>	17, 11	GetPrimitiveArrayCritical in imageioJPEG misses result - NULL check	PSU
<a href="#">JDK-8297437</a>	17	javadoc cannot link to old docs (with old style anchors)	PSU
<a href="#">JDK-8297431</a>	17	[JVMCI] HotSpotJVMCIRuntime.encodeThrowable should not throw an exception	PSU
<a href="#">JDK-8297264</a>	17, 11	C2: Cast node is not processed again in CCP and keeps a wrong too narrow type which is later replaced by top	PSU
<a href="#">JDK-8297211</a>	17	Expensive fillInStackTrace operation in HttpURLConnection.getOutputStream0 when no content-length in response	PSU
<a href="#">JDK-8297088</a>	17, 11	Update LCMS to 2.14	PSU
<a href="#">JDK-8296924</a>	17, 11	C2: assert(is_valid_AAarch64_address(dest.target())) failed: bad address	PSU
<a href="#">JDK-8296912</a>	17, 11	C2: CreateExNode::Identity fails with assert(i < _max) failed: oob: i=1, _max=1	PSU

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<a href="#">JDK-8296878</a>	17, 11	Document Filter attached to JPasswordField and setText("") is not cleared instead inserted characters replaced with unicode null characters	PSU
<a href="#">JDK-8296715</a>	17, 11, 8	CLDR v42 update for tzdata 2022f	PSU
<a href="#">JDK-8296675</a>	17, 11	Exclude linux-aarch64 in NSS tests	PSU
<a href="#">JDK-8296632</a>	8	Write a test to verify the content change of TextArea sends TextEvent	PSU
<a href="#">JDK-8296619</a>	17, 11	Upgrade jQuery to 3.6.1	PSU
<a href="#">JDK-8296611</a>	17, 11	Problemlist several sun/security tests until JDK-8295343 is resolved	PSU
<a href="#">JDK-8296548</a>	17	Improve MD5 intrinsic for x86_64	PSU
<a href="#">JDK-8296485</a>	8	BuildEEBasicConstraints.java test fails with SunCertPathBuilderException	PSU
<a href="#">JDK-8296480</a>	8	java/security/cert/pkix/policyChanges/TestPolicy.java is failing	PSU
<a href="#">JDK-8296389</a>	17	C2: PhaseCFG::convert_NeverBranch_to_Goto must handle both orders of successors	PSU
<a href="#">JDK-8296329</a>	17	jar validator doesn't account for minor class file version	PSU
<a href="#">JDK-8296239</a>	17, 11, 8	ISO 4217 Amendment 174 Update	PSU
<a href="#">JDK-8296136</a>	17	Use correct register in aarch64_enc_fast_unlock()	PSU
<a href="#">JDK-8296108</a>	17, 11, 8	(tz) Update Timezone Data to 2022f	PSU
<a href="#">JDK-8295982</a>	8	Failure in sun/security/tools/keytool/WeakAlg.java - ks: The process cannot access the file because it is being used by another process	PSU
<a href="#">JDK-8295952</a>	8	Problemlist existing compiler/rtm tests also on x86	PSU

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<a href="#">JDK-8295951</a>	20	intermittent cmp_baseline task failures with CDS files	PSU
<a href="#">JDK-8295788</a>	17, 11	C2 compilation hits "assertmode == ControlAroundStripMined && use == sfpt)    !use.is_reachable_from_root( failed: missed a node"	PSU
<a href="#">JDK-8295777</a>	17, 11	java/net/httpclient/ConnectExceptionTest.java should not rely on system resolver	PSU
<a href="#">JDK-8295774</a>	17, 11	Write a test to verify List sends ItemEvent/ActionEvent	PSU
<a href="#">JDK-8295724</a>	17	VirtualMachineError: Out of space in CodeCache for method handle intrinsic	PSU
<a href="#">JDK-8295723</a>	17, 11, 8	security/infra/wycheproof/RunWycheproof.java fails with Assertion Error	PSU
<a href="#">JDK-8295687</a>	17, 11, 8	Better BMP bounds	PSU
<a href="#">JDK-8295685</a>	17, 11	Update Libpng to 1.6.38	PSU
<a href="#">JDK-8295530</a>	17, 11	Update Zlib Data Compression Library to Version 1.2.13	PSU
<a href="#">JDK-8295414</a>	17	[Aarch64] C2: assert(false) failed: bad AD file	PSU
<a href="#">JDK-8295413</a>	17	com/sun/jdi/EATests.java fails with compiler flag -XX:+StressReflectiveCode	PSU
<a href="#">JDK-8295412</a>	11	support latest VS2022 MSC_VER in abstract_vm_version.cpp	PSU
<a href="#">JDK-8295405</a>	11	Add cause in a couple of IllegalArgumentException and InvalidParameterException shown by sun/security/pkcs11 tests	PSU
<a href="#">JDK-8295322</a>	8	Tests for JDK-8271459 were not backported to 11u	PSU
<a href="#">JDK-8295173</a>	17, 11, 8	(tz) Update Timezone Data to 2022e	PSU

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<a href="#">JDK-8295116</a>	17, 11	C2: assert(deadOutcnt() == 0 && !deadIsTop()) failed: node must be dead	PSU
<a href="#">JDK-8295066</a>	17	Folding of loads is broken in C2 after JDK-8242115	PSU
<a href="#">JDK-8295000</a>	17	java/util/Formatter/Basic test cleanup	PSU
<a href="#">JDK-8294958</a>	17	java/net/httpclient/ConnectTimeout tests are slow	PSU
<a href="#">JDK-8294947</a>	17, 11	Use 64bit atomics in patch_verified_entry on x86_64	PSU
<a href="#">JDK-8294902</a>	17	Undefined Behavior in C2 regalloc with null references	PSU
<a href="#">JDK-8294767</a>	8	8u contains two copies of test/./FileUtils.java, one uses JDK9+ features	PSU
<a href="#">JDK-8294705</a>	17, 11	Disable an assertion in test/jdk/java/util/DoubleStreamSums/CompensatedSums.java	PSU
<a href="#">JDK-8294677</a>	17	chunklevel::MAX_CHUNK_WORD_SIZE too small for some applications	PSU
<a href="#">JDK-8294580</a>	17, 11	frame::interpreter_frame_print_on() crashes if free BasicObjectLock exists in frame	PSU
<a href="#">JDK-8294548</a>	17	Problem list SA core file tests on macosx-x64 due to JDK-8294316	PSU
<a href="#">JDK-8294538</a>	17	missing is_unloading() check in SharedRuntime::fixup_callers_callsite()	PSU
<a href="#">JDK-8294378</a>	17, 11	URLPermission constructor exception when using tr locale	PSU
<a href="#">JDK-8294357</a>	17, 11, 8	(tz) Update Timezone Data to 2022d	PSU
<a href="#">JDK-8294307</a>	17, 11, 8	ISO 4217 Amendment 173 Update	PSU
<a href="#">JDK-8294217</a>	17	Assertion failure: parsing found no loops but there are some	PSU

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<a href="#">JDK-8294160</a>	17	misc crash dump improvements	PSU
<a href="#">JDK-8293996</a>	17, 11	C2: fix and simplify IdealLoopTree::do_remove_empty_loop	PSU
<a href="#">JDK-8293819</a>	17	sun/util/logging/PlatformLoggerTest.java failed with "RuntimeException: Retrieved backing PlatformLogger level null is not the expected CONFIG"	PSU
<a href="#">JDK-8293767</a>	17, 11, 8	AWT test TestSinhalaChar.java has old SCCS markings	PSU
<a href="#">JDK-8293742</a>	17, 11, 8	Better Banking of Sounds	PSU
<a href="#">JDK-8293734</a>	17, 11, 8	Improve BMP image handling	PSU
<a href="#">JDK-8293717</a>	17, 11, 8	Objective view of ObjectView	PSU
<a href="#">JDK-8293691</a>	17	converting a defined BasicType value to a string should not crash the VM	PSU
<a href="#">JDK-8293598</a>	17, 11, 8	Enhance InetAddress address handling	PSU
<a href="#">JDK-8293562</a>	17	KeepAliveCache Blocks Threads while Closing Connections	PSU
<a href="#">JDK-8293554</a>	17, 11, 8	Enhanced DH Key Exchanges	PSU
<a href="#">JDK-8293540</a>	8	[Metrics] Incorrectly detected resource limits with additional cgroup fs mounts	PSU
<a href="#">JDK-8293531</a>	17	C2: some vectorapi tests fail assert "Not monotonic" with flag -XX:TypeProfileLevel=222	PSU
<a href="#">JDK-8293493</a>	17	Signal Handlers printout should show signal block state	PSU
<a href="#">JDK-8293472</a>	8	Incorrect container resource limit detection if manual cgroup fs mounts present	PSU
<a href="#">JDK-8293466</a>	17	libsig should ignore non-modifying sigaction calls	PSU

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<a href="#">JDK-8293326</a>	17	jdk/sun/security/tools/jarsigner/compatibility/SignTwice.java slow on Windows	PSU
<a href="#">JDK-8293000</a>	17	Review running times of jshell regression tests	PSU
<a href="#">JDK-8292877</a>	17, 11	java/util/concurrent/atomic/Serial.java uses {Double,Long}Accumulator incorrectly	PSU
<a href="#">JDK-8292863</a>	11	assert(!_print_inlining_stream.size() > 0) failed: missing inlining msg	PSU
<a href="#">JDK-8292780</a>	17	misc tests failed "assert(false) failed: graph should be schedulable"	PSU
<a href="#">JDK-8292660</a>	17	C2: blocks made unreachable by NeverBranch-to-Goto conversion are removed incorrectly	PSU
<a href="#">JDK-8292602</a>	17	ZGC: C2 late barrier analysis uses invalid dominator information	PSU
<a href="#">JDK-8292541</a>	8	[Metrics] Reported memory limit may exceed physical machine memory	PSU
<a href="#">JDK-8292443</a>	17	Weak CAS VarHandle/Unsafe tests should test always-failing cases	PSU
<a href="#">JDK-8292328</a>	17	AccessibleActionsTest.java test instruction for show popup on JLabel did not specify shift key	PSU
<a href="#">JDK-8292297</a>	17	Fix up loading of override java.security properties file	PSU
<a href="#">JDK-8292285</a>	17	C2: remove unreachable block after NeverBranch-to-Goto conversion	PSU
<a href="#">JDK-8292177</a>	17	InitialSecurityProperty JFR event	PSU
<a href="#">JDK-8292159</a>	17	TYPE_USE annotations on generic type arguments of record components discarded	PSU
<a href="#">JDK-8292083</a>	8	Detected container memory limit may exceed physical machine memory	PSU



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<a href="#">JDK-8292066</a>	17	Convert TestInputArgument.sh and TestSystemLoadAvg.sh to java version	PSU
<a href="#">JDK-8292033</a>	17	Move jdk.X509Certificate event logic to JCA layer	PSU
<a href="#">JDK-8291825</a>	17	java/time/nontestng/java/time/zone/CustomZoneNameTest.java fails if defaultLocale and defaultFormatLocale are different	PSU
<a href="#">JDK-8291570</a>	8	[TESTBUG] Part of JDK-8250984 absent from 11u	PSU
<a href="#">JDK-8290964</a>	17, 11	C2 compilation fails with assert "non-reduction loop contains reduction nodes"	PSU
<a href="#">JDK-8290920</a>	11	sspi_bridge.dll not built if BUILD_CRYPT0 is false	PSU
<a href="#">JDK-8290899</a>	17, 11	java/lang/String/StringRepeat.java test requests too much heap on windows x86	PSU
<a href="#">JDK-8290850</a>	17	C2: create_new_if_for_predicate() does not clone pinned phi input nodes resulting in a broken graph	PSU
<a href="#">JDK-8290838</a>	17	Improve test coverage for XPath functions: Number Functions	PSU
<a href="#">JDK-8290837</a>	17	Improve test coverage for XPath functions: Boolean Functions	PSU
<a href="#">JDK-8290836</a>	17	Improve test coverage for XPath functions: String Functions	PSU
<a href="#">JDK-8290322</a>	17	Optimize Vector.rearrange over byte vectors for AVX512BW targets.	PSU
<a href="#">JDK-8290197</a>	17, 11	test/jdk/java/nio/file/Files/probeContentType/Basic.java fails on some systems for the ".rar" extension	PSU
<a href="#">JDK-8290083</a>	17	ResponseBodyBeforeError: AssertionError or SSLException: Unsupported or unrecognized SSL message	PSU

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<a href="#">JDK-8290067</a>	17	Show stack dimensions in UL logging when attaching threads	PSU
<a href="#">JDK-8289948</a>	17	Improve test coverage for XPath functions: Node Set Functions	PSU
<a href="#">JDK-8289695</a>	11, 8	[TESTBUG] TestMemoryAwareness.java fails on cgroups v2 and crun	PSU
<a href="#">JDK-8289647</a>	17	AssertionError during annotation processing of record related tests	PSU
<a href="#">JDK-8289562</a>	11	Change bugs.java.com and bugreport.java.com URL's to https	PSU
<a href="#">JDK-8289549</a>	8	ISO 4217 Amendment 172 Update	PSU
<a href="#">JDK-8289511</a>	17	Improve test coverage for XPath Axes: child	PSU
<a href="#">JDK-8289508</a>	17	Improve test coverage for XPath Axes: ancestor, ancestor-or-self, preceding, and preceding-sibling	PSU
<a href="#">JDK-8289440</a>	17	Remove vmTestbase/nsk/monitoring/MemoryPoolMBean/isCollectionUsageThresholdExceeded/isexceeded003 from ProblemList.txt	PSU
<a href="#">JDK-8289400</a>	17	Improve com/sun/jdi/TestScaffold error reporting	PSU
<a href="#">JDK-8289350</a>	17, 11, 8	Better media supports	PSU
<a href="#">JDK-8288854</a>	17	getLocalGraphicsEnvironment() on for multi-screen setups throws exception NPE	PSU
<a href="#">JDK-8288516</a>	17, 11, 8	Enhance font creation	PSU
<a href="#">JDK-8288415</a>	17	java/awt/PopupMenu/PopupMenuLocation.java is unstable in MacOS machines	PSU
<a href="#">JDK-8288332</a>	17, 11	Tier1 validate-source fails after 8279614	PSU
<a href="#">JDK-8288130</a>	17	compiler error with AP and explicit record accessor	PSU

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<a href="#">JDK-8288005</a>	17	HotSpot build with disabled PCH fails for Windows AArch64	PSU
<a href="#">JDK-8287741</a>	8	Fix of JDK-8287107 (unused cgv1 freezer controller) was incomplete	PSU
<a href="#">JDK-8287593</a>	17	ShortResponseBody could be made more resilient to rogue connections	PSU
<a href="#">JDK-8287491</a>	17	compiler/jymci/errors/TestInvalidDebugInfo.java fails new assert: assert(((uint)t < T_CONFLICT + 1) failed: invalid type #	PSU
<a href="#">JDK-8287463</a>	8	JFR: Disable TestDevNull.java on Windows	PSU
<a href="#">JDK-8287411</a>	17, 11	Enhance DTLS performance	PSU
<a href="#">JDK-8287217</a>	17	C2: PhaseCCP: remove not visited nodes, prevent type inconsistency	PSU
<a href="#">JDK-8287180</a>	17, 11	Update IANA Language Subtag Registry to Version 2022-08-08	PSU
<a href="#">JDK-8287109</a>	8	Distrust.java failed with CertificateExpiredException	PSU
<a href="#">JDK-8287107</a>	8	CgroupSubsystemFactory.setCgroupV2Path asserts with freezer controller	PSU
<a href="#">JDK-8287011</a>	11	Improve container information	PSU
<a href="#">JDK-8286962</a>	17, 11	java/net/httpclient/ServerCloseTest.java failed once with ConnectException	PSU
<a href="#">JDK-8286873</a>	17	Improve websocket test execution time	PSU
<a href="#">JDK-8286844</a>	17	com/sun/jdi/RedefineCrossEvent.java failed with 1 threads completed while VM suspended	PSU
<a href="#">JDK-8286800</a>	17, 11	Assert in PhaseldealLoop::dump_real_LCA is too strong	PSU

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<a href="#">JDK-8286707</a>	17	JFR: Don't commit JFR internal jdk.JavaMonitorWait events	PSU
<a href="#">JDK-8286705</a>	17	GCC 12 reports use-after-free potential bugs	PSU
<a href="#">JDK-8286694</a>	17	Incorrect argument processing in java launcher	PSU
<a href="#">JDK-8286624</a>	8	Regression Test CoordinateTruncationBug.java fails on OL8.3	PSU
<a href="#">JDK-8286562</a>	17	GCC 12 reports some compiler warnings	PSU
<a href="#">JDK-8286496</a>	17, 11, 8	Improve Thread labels	PSU
<a href="#">JDK-8286154</a>	17	Fix 3rd party notices in test files	PSU
<a href="#">JDK-8286070</a>	17, 11	Improve UTF8 representation	PSU
<a href="#">JDK-8286030</a>	17, 11	Avoid JVM crash when containers share the same /tmp dir	PSU
<a href="#">JDK-8285965</a>	17	TestScenarios.java does not check for "<!--safepoint while printing -\u2013" correctly	PSU
<a href="#">JDK-8285835</a>	17, 11	SIGSEGV in PhaseldealLoop::build_loop_late_post_work	PSU
<a href="#">JDK-8285690</a>	17, 11	CloneableReference subtest should not throw CloneNotSupportedException	PSU
<a href="#">JDK-8285399</a>	17, 11	JNI exception pending in awt_GraphicsEnv.c:1432	PSU
<a href="#">JDK-8285021</a>	8	Improve CORBA communication	PSU
<a href="#">JDK-8284977</a>	8	MetricsTesterCgroupV2.getLongValueEntryFromFile fails when named value doesn't exist	PSU
<a href="#">JDK-8284767</a>	17	Create an automated test for JDK-4422535	PSU
<a href="#">JDK-8284756</a>	8	[11u] Remove unused isUseContainerSupport in CgroupV1Subsystem	PSU
<a href="#">JDK-8284726</a>	17	Print active locale settings in hs_err reports and in VM.info	PSU

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<a href="#">JDK-8284690</a>	8	[macos] VoiceOver : Getting java.lang.IllegalArgumentException: Invalid location on Editable JComboBox	PSU
<a href="#">JDK-8284524</a>	17	Create an automated test for JDK-4422362	PSU
<a href="#">JDK-8284165</a>	17, 11	Add pid to process reaper thread name	PSU
<a href="#">JDK-8284115</a>	17	[IR Framework] Compilation is not found due to rare safepoint while dumping PrintIdeal/PrintOptoAssembly	PSU
<a href="#">JDK-8284102</a>	8	[TESTBUG] [11u] Retroactively add regression test for JDK-8272124	PSU
<a href="#">JDK-8284023</a>	11	java.sun.awt.X11GraphicsDevice.getDoubleBufferVisuals() leaks XdbeScreenVisualInfo	PSU
<a href="#">JDK-8283870</a>	17, 11	jdeprscan --help causes an exception when the locale is ja, zh_CN or de	PSU
<a href="#">JDK-8283719</a>	17, 11	java/util/logging/CheckZombieLockTest.java failing intermittently	PSU
<a href="#">JDK-8283717</a>	17, 11	vmTestbase/nsk/jdi/ThreadStartEvent/thread/thread001 failed due to SocketTimeoutException	PSU
<a href="#">JDK-8283606</a>	17, 11, 8	Tests may fail with zh locale on MacOS	PSU
<a href="#">JDK-8283277</a>	8	ISO 4217 Amendment 171 Update	PSU
<a href="#">JDK-8282958</a>	17, 11	Rendering Issues with Borders on Windows High-DPI systems	PSU
<a href="#">JDK-8282947</a>	8	JFR: Dump on shutdown live-locks in some conditions	PSU
<a href="#">JDK-8282771</a>	17	Create test case for JDK-8262981	PSU
<a href="#">JDK-8282577</a>	17	ICC_Profile.setData(int, byte[]) invalidates the profile	PSU

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<a href="#">JDK-8282511</a>	11, 8	Use fixed certificate validation date in SSLExampleCert template	PSU
<a href="#">JDK-8282398</a>	11, 8	EndingDotHostname.java test fails because SSL cert expired	PSU
<a href="#">JDK-8282219</a>	11	jdk/java/lang/ProcessBuilder/Basic.java fails on AIX	PSU
<a href="#">JDK-8282143</a>	17	Objects.requireNonNull should be ForceInline	PSU
<a href="#">JDK-8282036</a>	17, 11	Change java/util/zip/ZipFile/DeleteTempJar.java to stop HttpServer cleanly in case of exceptions	PSU
<a href="#">JDK-8281170</a>	17	Test jdk/tools/jpackage/windows/WinInstallerIconTest always fails on Windows 11	PSU
<a href="#">JDK-8281122</a>	17	[IR Framework] Cleanup IR matching code in preparation for JDK-8280378	PSU
<a href="#">JDK-8280896</a>	17, 11	java/nio/file/Files/probeContentType/Basic.java fails on Windows 11	PSU
<a href="#">JDK-8280889</a>	17	java/lang/instrument/GetObjectSizeIntrinsicsTest.java fails with -XX:-UseCompressedOops	PSU
<a href="#">JDK-8280868</a>	17	LineBodyHandlerTest.java creates and discards too many clients	PSU
<a href="#">JDK-8280784</a>	17	VM_Cleanup unnecessarily processes all thread oops	PSU
<a href="#">JDK-8280703</a>	17	CipherCore.doFinal(...) causes potentially massive byte[] allocations during decryption	PSU
<a href="#">JDK-8280553</a>	17	resourcehogs/serviceability/sa/TestHeapDumpForLargeArray.java can fail if GC occurs	PSU
<a href="#">JDK-8280401</a>	11	[sspi] gss_accept_sec_context leaves output_token uninitialized	PSU

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<a href="#">JDK-8280391</a>	11	NMT: Correct NMT tag on CollectedHeap	PSU
<a href="#">JDK-8280166</a>	17	Extend java/lang/instrument/GetObjectSizeIntrinsicsTest.java test cases	PSU
<a href="#">JDK-8280132</a>	17	Incorrect comparator com.sun.beans.introspect.MethodInfo.MethodOrder	PSU
<a href="#">JDK-8280048</a>	17, 11, 8	Missing comma in copyright header	PSU
<a href="#">JDK-8280007</a>	17	Enable Neoverse N1 optimizations for Arm Neoverse V1 & N2	PSU
<a href="#">JDK-8279941</a>	11	sun/security/pkcs11/Signature/TestDSAKeyLength.java fails when NSS version detection fails	PSU
<a href="#">JDK-8279662</a>	11	serviceability/sa/ClhsdbScanOops.java can fail due to unexpected GC	PSU
<a href="#">JDK-8279614</a>	17, 11	The left line of the TitledBorder is not painted on 150 scale factor	PSU
<a href="#">JDK-8279351</a>	17	[TESTBUG] SAdebugDTest.java does not handle "Address already in use" error	PSU
<a href="#">JDK-8279119</a>	17	src/jdk.hotspot.agent/doc/index.html file contains references to scripts that no longer exist	PSU
<a href="#">JDK-8279024</a>	17	Remove javascript references from clhsdb.html	PSU
<a href="#">JDK-8278965</a>	20	crash in SymbolTable::do_lookup	PSU
<a href="#">JDK-8278961</a>	17	Enable debug logging in java/net/DatagramSocket/SendDatagramToBadAddress.java	PSU
<a href="#">JDK-8278951</a>	8	containers/cgroup/PlainRead.java fails on Ubuntu 21.10	PSU
<a href="#">JDK-8277990</a>	17	NMT: Remove NMT shutdown capability	PSU

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<a href="#">JDK-8277946</a>	17	NMT: Remove VM.native_memory shutdown jcmd command option	PSU
<a href="#">JDK-8277822</a>	17	Remove debug-only heap overrun checks in os::malloc and friends	PSU
<a href="#">JDK-8277485</a>	17	Zero: Fix fast{i,f}access_0 bytecodes handling	PSU
<a href="#">JDK-8277351</a>	11	ProblemList runtime/jni/checked/TestPrimitiveArrayCriticalWithBadParam.java on macosx-x64	PSU
<a href="#">JDK-8277346</a>	11	ProblemList 7 serviceability/sa tests on macosx-x64	PSU
<a href="#">JDK-8276086</a>	17	Increase size of metaspace mappings	PSU
<a href="#">JDK-8276064</a>	17	CheckCastPP with raw oop input floats below a safepoint	PSU
<a href="#">JDK-8275843</a>	17	Random crashes while the UI code is executed	PSU
<a href="#">JDK-8275713</a>	8	TestDockerMemoryMetrics test fails on recent runc	PSU
<a href="#">JDK-8275704</a>	17	Metaspace::contains() should be threadsafe	PSU
<a href="#">JDK-8275650</a>	8	Problemlist java/io/File/createTempFile/SpecialTempFile.java for Windows 11	PSU
<a href="#">JDK-8275582</a>	17	Don't purge metaspace mapping lists	PSU
<a href="#">JDK-8275535</a>	8	Retrying a failed authentication on multiple LDAP servers can lead to users blocked	PSU
<a href="#">JDK-8275320</a>	17	NMT should perform buffer overrun checks	PSU
<a href="#">JDK-8275301</a>	17	Unify C-heap buffer overrun checks into NMT	PSU
<a href="#">JDK-8275173</a>	17	testlibrary_tests/ir_framework/tests/TestCheckedTests.java fails after JDK-8274911	PSU



OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8274939</a>	11	Incorrect size of the pixel storage is used by the robot on macOS	PSU
<a href="#">JDK-8274911</a>	17	testlibrary_tests/ir_framework/tests/TestIRMatching.java fails with "java.lang.RuntimeException: Should have thrown exception"	PSU
<a href="#">JDK-8273895</a>	11	compiler/ciReplay/TestVMNoCompLevel.java fails due to wrong data size with TieredStopAtLevel=2,3	PSU
<a href="#">JDK-8273806</a>	11	compiler/cpuflags/TestSSE4Disabled.java should test for CPU feature explicitly	PSU
<a href="#">JDK-8273410</a>	17	IR verification framework fails with "Should find method name in validIrRulesMap"	PSU
<a href="#">JDK-8273154</a>	17	Provide a JavadocTester method for non-overlapping, unordered output matching	PSU
<a href="#">JDK-8272985</a>	17, 11	Reference discovery is confused about atomicity and degree of parallelism	PSU
<a href="#">JDK-8272702</a>	17	Resolving URI relative path with no / may lead to incorrect toString	PSU
<a href="#">JDK-8271838</a>	17	AmazonCA.java interop test fails	PSU
<a href="#">JDK-8271506</a>	11	Add ResourceHashtable support for deleting selected entries	PSU
<a href="#">JDK-8271471</a>	17	[IR Framework] Rare occurrence of "<!-- safepoint while printing ->" in PrintIdeal/PrintOptoAssembly can let tests fail	PSU
<a href="#">JDK-8271323</a>	11	[TESTBUG] serviceability/sa/ClhsdbCDSCore.java fails with -XX:TieredStopAtLevel=1	PSU
<a href="#">JDK-8270609</a>	11	[TESTBUG] java/awt/print/Dialog/DialogCopies.java does not show instruction	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8270476</a>	17	Make floating-point test infrastructure more lambda and method reference friendly	PSU
<a href="#">JDK-8270317</a>	8	Large Allocation in CipherSuite	PSU
<a href="#">JDK-8270156</a>	17	Add "randomness" and "stress" keys to JTreg tests which use StressGCM, StressLCM and/or StressIGVN	PSU
<a href="#">JDK-8268288</a>	17	jdk/jfr/api/consumer/streaming/TestOutOfProcessMigration.java fails with "Error: ShouldNotReachHere()"	PSU
<a href="#">JDK-8267038</a>	17, 11	Update IANA Language Subtag Registry to Version 2022-03-02	PSU
<a href="#">JDK-8266974</a>	17, 11	duplicate property key in java.sql.rowset resource bundle	PSU
<a href="#">JDK-8266391</a>	8	Replace use of reflection in jdk.internal.platform.Metrics	PSU
<a href="#">JDK-8264512</a>	11	jdk/test/jdk/java/util/prefs/ExportNode.java relies on default platform encoding	PSU
<a href="#">JDK-8264299</a>	11	Create implementation of native accessibility peer for ScrollPane and ScrollBar Java Accessibility roles	PSU
<a href="#">JDK-8264200</a>	11	java/nio/channels/DatagramChannel/SRTest.java fails intermittently	PSU
<a href="#">JDK-8263404</a>	8	RsaPrivateKeySpec is always recognized as RSAPrivateCrtKeySpec in RSAKeyFactory.engineGetKeySpec	PSU
<a href="#">JDK-8262386</a>	17	resourcehogs/serviceability/sa/TestHeapDumpForLargeArray.java timed out	PSU
<a href="#">JDK-8262379</a>	8	Add regression test for JDK-8257746	PSU
<a href="#">JDK-8262110</a>	7	DST starts from incorrect time in 2038	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8262060</a>	11	compiler/whitebox/BlockingCompilation.java timed out	PSU
<a href="#">JDK-8261352</a>	11	Create implementation for component peer for all the components who should be ignored in a11y interactions	PSU
<a href="#">JDK-8261351</a>	11	Create implementation for NSAccessibilityRadioButton protocol	PSU
<a href="#">JDK-8261350</a>	11	Create implementation for NSAccessibilityCheckBox protocol peer	PSU
<a href="#">JDK-8261279</a>	11	sun/util/resources/cldr/TimeZoneNamesTest.java timed out	PSU
<a href="#">JDK-8261270</a>	11	MakeMethodNotCompilableTest fails with -XX:TieredStopAtLevel={1,2,3}	PSU
<a href="#">JDK-8260576</a>	11	Typo in compiler/runtime/safepoints/TestRegisterRestoring.java	PSU
<a href="#">JDK-8259267</a>	11	Refactor LoaderLeak shell test as java test.	PSU
<a href="#">JDK-8259265</a>	11	Refactor UncaughtExceptions shell test as java test.	PSU
<a href="#">JDK-8258512</a>	17	serviceability/sa/TestJmapCore.java timed out on macOS 10.13.6	PSU
<a href="#">JDK-8257928</a>	11	Test image build failure with clang-10 due to -Wmisleading-indentation	PSU
<a href="#">JDK-8257620</a>	8	Do not use objc_msgSend_stret to get macOS version	PSU
<a href="#">JDK-8256934</a>	11	C2: assert(C☐live_nodes() ☐ C☐max_node_limit()) failed: Live Node limit exceeded limit	PSU
<a href="#">JDK-8256126</a>	11	Create implementation for NSAccessibilityImage protocol peer	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8256111</a>	11	Create implementation for NSAccessibilityStaticText protocol	PSU
<a href="#">JDK-8256110</a>	11	Create implementation for NSAccessibilityStepper protocol	PSU
<a href="#">JDK-8255710</a>	11	Opensource unit/regression tests for CMM	PSU
<a href="#">JDK-8254997</a>	8	Remove unimplemented OSContainer::read_memory_limit_in_bytes	PSU
<a href="#">JDK-8254717</a>	8	isAssignableFrom checks in KeyFactorySpi.engineGetKeySpec appear to be backwards	PSU
<a href="#">JDK-8254267</a>	17, 11	javax/xml/crypto/dsig/LogParameters.java failed with "RuntimeException: Unexpected log output:"	PSU
<a href="#">JDK-8254001</a>	8	[Metrics] Enhance parsing of cgroup interface files for version detection	PSU
<a href="#">JDK-8253939</a>	8	[TESTBUG] Increase coverage of the cgroups detection code	PSU
<a href="#">JDK-8253797</a>	8	[cgroups v2] Account for the fact that swap accounting is disabled on some systems	PSU
<a href="#">JDK-8253727</a>	8	[cgroups v2] Memory and swap limits reported incorrectly	PSU
<a href="#">JDK-8253714</a>	8	[cgroups v2] Soft memory limit incorrectly using memory.high	PSU
<a href="#">JDK-8253435</a>	8	Cgroup: 'stomping of _mount_path' crash if manually mounted cpuset exist	PSU
<a href="#">JDK-8252957</a>	8	Wrong comment in CgroupV1Subsystem::cpu_quota	PSU
<a href="#">JDK-8252715</a>	11	Problem list java/awt/event/KeyEvent/KeyTyped/CtrlASCII.java on Linux	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8252532</a>	11	use Utils.TEST_NATIVE_PATH instead of System.getProperty("test.nativepath")	PSU
<a href="#">JDK-8252401</a>	11	Introduce Utils.TEST_NATIVE_PATH	PSU
<a href="#">JDK-8252359</a>	8	HotSpot Not Identifying it is Running in a Container	PSU
<a href="#">JDK-8251177</a>	17	[macosx] The text "big" is truncated in JTabbedPane	PSU
<a href="#">JDK-8249691</a>	11	jdk/lambda/vm/StrictfpDefault.java file can be removed	PSU
<a href="#">JDK-8248899</a>	8	security/infra/java/security/cert/CertPathValidator/certification/QuoVadisCA.java fails, Certificate has been revoked	PSU
<a href="#">JDK-8248306</a>	11	gc/stress/gclocker/TestExcessGCLockerCollections.java does not compile	PSU
<a href="#">JDK-8247741</a>	11	Test test/hotspot/jtreg/runtime/7162488/TestUnrecognizedVmOption.java fails when -XX:+IgnoreUnrecognizedVMOptions is set	PSU
<a href="#">JDK-8245654</a>	20, 17, 11, 8	Add Certigna Root CA	PSU
<a href="#">JDK-8245543</a>	8	Cgroups: Incorrect detection logic on some systems (still reproducible)	PSU
<a href="#">JDK-8245245</a>	11	WebSocket can lose the URL encoding of URI query parameters	PSU
<a href="#">JDK-8244669</a>	17	convert clhsdb "mem" command from javascript to java	PSU
<a href="#">JDK-8244500</a>	8	jtreg test error in test/hotspot/jtreg/containers/docker/TestMemoryAwareness.java	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8243543</a>	8	jtreg test security/infra/java/security/cert/CertPathValidator/certification/BuypassCA.java fails	PSU
<a href="#">JDK-8242115</a>	17	C2 SATB barriers are not safepoint-safe	PSU
<a href="#">JDK-8241806</a>	11	The sun/awt/shell/FileSystemViewMemoryLeak.java is unstable	PSU
<a href="#">JDK-8241293</a>	17, 11	CompressedClassSpaceSizeInJmapHeap.java time out after 8 minutes	PSU
<a href="#">JDK-8240189</a>	8	[TESTBUG] Some cgroup tests are failing after JDK-8231111	PSU
<a href="#">JDK-8239827</a>	8	The test OpenByUNCPathNameTest.java should be changed to be manual	PSU
<a href="#">JDK-8239785</a>	8	Cgroups: Incorrect detection logic on old systems in hotspot	PSU
<a href="#">JDK-8239559</a>	8	Cgroups: Incorrect detection logic on some systems	PSU
<a href="#">JDK-8238936</a>	11	The crash in XRobotPeer when the custom GraphicsDevice is used	PSU
<a href="#">JDK-8237479</a>	8	8230305 causes slowdebug build failure	PSU
<a href="#">JDK-8235448</a>	11	code cleanup in SSLContextImpl.java	PSU
<a href="#">JDK-8235297</a>	17	sun/security/ssl/SSLSessionImpl/ResumptionUpdateBoundValues.java fails intermittent	PSU
<a href="#">JDK-8234484</a>	8	Add ability to configure third port for remote JMX	PSU
<a href="#">JDK-8233570</a>	8	[TESTBUG] HTMLToolkit test bug5043626.java is failing on macos	PSU
<a href="#">JDK-8233462</a>	11	serviceability/tmtools/jstat tests times out with -Xcomp	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8232207</a>	8	Linux os::available_memory re-reads cgroup configuration on every invocation	PSU
<a href="#">JDK-8231595</a>	11	[TEST] develop a test case for SuspendThreadList including current thread	PSU
<a href="#">JDK-8231491</a>	17	JDI tc02x004 failed again due to wrong # of breakpoints	PSU
<a href="#">JDK-8231111</a>	8	Cgroups v2: Rework Metrics in java.base so as to recognize unified hierarchy	PSU
<a href="#">JDK-8230731</a>	11	SA tests fail with "Windbg Error: ReadVirtual failed"	PSU
<a href="#">JDK-8230374</a>	17, 11	maxOutputSize, instead of javatest.maxOutputSize, should be used in TEST.properties	PSU
<a href="#">JDK-8230305</a>	8	Cgroups v2: Container awareness	PSU
<a href="#">JDK-8229202</a>	8	Docker reporting causes secondary crashes in error handling	PSU
<a href="#">JDK-8229182</a>	8	[TESTBUG] runtime/containers/docker/TestMemoryAwareness.java test fails on SLES12	PSU
<a href="#">JDK-8228585</a>	8	jdk/internal/platform/cgroup/TestCgroupMetrics.java - NumberFormatException because of large long values (memory limit_in_bytes)	PSU
<a href="#">JDK-8227422</a>	11	sun/net/www/protocol/file/DirPermissionDenied.java failed on Windows 2016 because DirPermissionDenied directory has no read permission	PSU
<a href="#">JDK-8226917</a>	11	jvmti/scenarios/contention/TC04/tc04t001/TestDescription.java fails on jvmti::InterruptThread (JVMTI_ERROR_THREAD_NOT_ALIVE)	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8226595</a>	11	jvmti/scenarios/contention/TC04/tc04t001/TestDescription.java still fails due to wrong number of MonitorContentedEntered events	PSU
<a href="#">JDK-8226236</a>	8	win32: gc/metaspaces/TestCapacityUntilGCWrapAround.java fails	PSU
<a href="#">JDK-8225648</a>	11	[TESTBUG] java/lang/annotation/loaderLeak/Main.java fails with -Xcomp	PSU
<a href="#">JDK-8224024</a>	11	java/util/concurrent/BlockingQueue/DrainToFails.java testBounded fails intermittently	PSU
<a href="#">JDK-8223783</a>	17	sun/net/www/http/HttpClient/MultiThreadTest.java sometimes detect threads+1 connections	PSU
<a href="#">JDK-8223736</a>	11	jvmti/scenarios/contention/TC04/tc04t001/TestDescription.java fails due to wrong number of MonitorContentedEntered events	PSU
<a href="#">JDK-8223716</a>	11	sun/net/www/http/HttpClient/MultiThreadTest.java should be more resilient to unexpected traffic	PSU
<a href="#">JDK-8223463</a>	11	Replace wildcard address with loopback or local host in tests - part 2	PSU
<a href="#">JDK-8222430</a>	11	Add tests for ElementKind predicates	PSU
<a href="#">JDK-8221351</a>	11	Crash in KlassFactory::check_shared_class_file_load_hook	PSU
<a href="#">JDK-8221168</a>	11	java/util/concurrent/CountDownLatch/Basic.java fails	PSU
<a href="#">JDK-8221098</a>	11	Run java/net/URL/HandlerLoop.java in othervm mode	PSU
<a href="#">JDK-8218460</a>	11	Test generation scripts do not invoke stream preprocessor correctly	PSU



OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8218133</a>	11	sun/net/www/protocol/http/ProtocolRedirect.java failed with "java.net.ConnectException"	PSU
<a href="#">JDK-8217353</a>	11	java/util/logging/LogManager/Configuration/updateConfiguration/HandlersOnComplexResetUpdate.java fails with Unexpected reference: java.lang.ref.WeakReference	PSU
<a href="#">JDK-8216366</a>	8	Add rationale to PER_CPU_SHARES define	PSU
<a href="#">JDK-8215759</a>	11	[test] java/math/BigInteger/ModPow.java can throw an ArithmeticException	PSU
<a href="#">JDK-8215372</a>	11	test/jdk/java/nio/file/DirectoryStream/Basic.java not correct when using a glob	PSU
<a href="#">JDK-8214445</a>	11	[test] java/net/URL/HandlerLoop has illegal reflective access	PSU
<a href="#">JDK-8213932</a>	11	[TESTBUG] assertEquals is invoked with the arguments in the wrong order	PSU
<a href="#">JDK-8213531</a>	17	Test javax/swing/border/TestTitledBorderLeak.java fails	PSU
<a href="#">JDK-8213265</a>	11	fix missing newlines at end of files	PSU
<a href="#">JDK-8213130</a>	11	Update ProblemList after verification of jtreg tests in Win 7	PSU
<a href="#">JDK-8212961</a>	17	[TESTBUG] vmTestbase/nsk/stress/jni/ native code cleanup	PSU
<a href="#">JDK-8212216</a>	11	JGSS: Fix leak in exception cases in getJavaOID()	PSU
<a href="#">JDK-8212165</a>	11	JGSS: Fix cut/paste error in NativeUtil.c	PSU
<a href="#">JDK-8210927</a>	17	JDB tests do not update source path after doing a redefine class	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8210373</a>	11	Deadlock in libj2gss.so when loading "j2gss" and "net" libraries in parallel.	PSU
<a href="#">JDK-8209935</a>	17, 11	Test to cover CodeSource.getCodeSigners()	PSU
<a href="#">JDK-8209774</a>	11	Refactor shell test javax/xml/jaxp/common/8035437/run.sh to java	PSU
<a href="#">JDK-8209115</a>	11	adjust libsplashscreen linux ppc64le builds for easier libpng update	PSU
<a href="#">JDK-8209023</a>	11	fix 2 compiler tests to avoid JDK-8208690	PSU
<a href="#">JDK-8208077</a>	20, 17, 11	File.listRoots performance degradation	PSU
<a href="#">JDK-8207248</a>	11	Reduce incidence of compiler.warn.source.no.bootclasspath in javac tests	PSU
<a href="#">JDK-8205959</a>	8	Do not restart close if errno is EINTR	PSU
<a href="#">JDK-8203485</a>	8	[freetype] text rotated on 180 degrees is too narrow	PSU
<a href="#">JDK-8202621</a>	11	bad test with broken links needs to be updated	PSU
<a href="#">JDK-8197408</a>	8	Bad pointer comparison and small cleanup in os_linux.cpp	PSU
<a href="#">JDK-8196467</a>	8	javax/swing/JInternalFrame/Test6325652.java fails	PSU
<a href="#">JDK-8196196</a>	8	Headful tests should not be run in headless mode	PSU
<a href="#">JDK-8195809</a>	17	[TESTBUG] jps and jcmd -l support for containers is not tested	PSU
<a href="#">JDK-8195716</a>	11	BootstrapLoggerTest : Executor still alive	PSU
<a href="#">JDK-8195057</a>	11	java/util/concurrent/CountDownLatch/Basic.java failed w/ Xcomp	PSU
<a href="#">JDK-8192931</a>	17, 11	Regression test java/awt/font/TextLayout/CombiningPerf.java fails	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8190492</a>	11	Remove SSLv2Hello and SSLv3 from default enabled TLS protocols	PSU
<a href="#">JDK-8186765</a>	17	Speed up test sun/net/www/protocol/https/HttpClient/ProxyAuthTest.java	PSU
<a href="#">JDK-8179317</a>	11	[TESTBUG] rewrite runtime shell tests in java	PSU
<a href="#">JDK-8177560</a>	8	@headful key can be removed from the tests for JavaSound	PSU
<a href="#">JDK-8171405</a>	11	java/net/URLConnection/ResendPostBody.java failed with "Error while cleaning up threads after test"	PSU
<a href="#">JDK-8170705</a>	11	sun/net/www/protocol/http/StackTraceTest.java fails intermittently with Invalid Http response	PSU
<a href="#">JDK-8159135</a>	8	[PIT] javax/swing/JMenuItem/8152981/MenuItemIconTest.java always fail	PSU
<a href="#">JDK-8156581</a>	8	Cleanup of ProblemList.txt	PSU
<a href="#">JDK-8156579</a>	8	Two JavaBeans tests failed	PSU
<a href="#">JDK-8155246</a>	17	Throw error if default java.security file is missing	PSU
<a href="#">JDK-8144030</a>	17, 11	[macosx] test java/awt/Frame/ShapeNotSetSometimes/ShapeNotSetSometimes.java fails (again)	PSU
<a href="#">JDK-8142540</a>	8	[TEST_BUG] Test sun/awt/dnd/8024061/bug8024061.java fails on ubuntu	PSU
<a href="#">JDK-8137101</a>	8	[TEST_BUG] javax/swing/plaf/basic/BasicHTML/4251579/bug4251579.java failure due to timing	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8129315</a>	11	java/net/Socket/LingerTest.java and java/net/Socket/ShutdownBoth.java timeout intermittently	PSU
<a href="#">JDK-8075964</a>	8	Test java/awt/Mouse/TitleBarDoubleClick/TitleBarDoubleClick.html fails intermittently with timeout error	PSU
<a href="#">JDK-8073446</a>	7	TimeZone getOffset API does not return a DST offset between years 2038-2137	PSU
<a href="#">JDK-8072770</a>	8	[TESTBUG] Some Introspector tests fail with a Java heap bigger than 4GB	PSU
<a href="#">JDK-8065422</a>	11, 8	Trailing dot in hostname causes TLS handshake to fail with SNI disabled	PSU
<a href="#">JDK-8065097</a>	17, 11	[macosx] javax/swing/Popup/TaskbarPositionTest.java fails because Popup is one pixel off	PSU
<a href="#">JDK-8048190</a>	17	NoClassDefFoundError omits original ExceptionInInitializerError	PSU
<a href="#">JDK-8042098</a>	8	[TESTBUG] Test sun/java2d/AcceleratedXORModeTest.java fails on Windows	PSU
<a href="#">JDK-8039888</a>	8	[TEST_BUG] keyboard garbage after javax/swing/plaf/windows/WindowsRootPaneUI/WrongAltProcessing/WrongAltProcessing.java	PSU
<a href="#">JDK-8035787</a>	11	SourcePositions are wrong for Strings concatenated with '+' operator	PSU
<a href="#">JDK-8008243</a>	17	Zero: Implement fast bytecodes	PSU
<a href="#">JDK-7188098</a>	11	TEST_BUG: closed/javax/sound/midi/Synthesizer/Receiver/bug6186488.java fails	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-7176326</a>	7	CertPath/CertPathBuilderTest failures after webrev 6854712_6637288_7126011	PSU
<a href="#">JDK-7124381</a>	8	DragSourceListener.dragDropEnd() never been called on completion of dnd operation	PSU
<a href="#">JDK-7124238</a>	8	[macosx] Font in BasicHTML document is bigger than it should be	PSU
<a href="#">JDK-7001973</a>	8	java/awt/Graphics2D/CopyAreaOOB.java fails	PSU
<a href="#">JDK-6829250</a>	8	Reg test: java/awt/Toolkit/ScreenInsetsTest/ScreenInsetsTest.java fails in Windows	PSU
<a href="#">JDK-6779701</a>	17	Wrong defect ID in the code of test LocalRMIServerSocketFactoryTest.java	PSU
<a href="#">JDK-6734341</a>	8	REGTEST fails: SelectionAutoscrollTest.html	PSU
<a href="#">JDK-6528710</a>	17, 11	sRGB-ColorSpace to sRGB-ColorSpace Conversion	PSU
<a href="#">JDK-8304389</a>	11	[11u] Crash on Windows in C2 compiled code after 8248238 and 8218431	PSU
<a href="#">JDK-8304053</a>	8	Revert os specific stubs for SystemMetrics	PSU
<a href="#">JDK-8303828</a>	8	[Solaris] Broken jdk8u build after JDK-8266391	PSU
<a href="#">JDK-8303408</a>	8	[AIX] Broken jdk8u build after JDK-8266391	PSU
<a href="#">JDK-8303075</a>	11	[11u] Add CompileClassWithDebugTest to ProblemList for 8303074	PSU
<a href="#">JDK-8302903</a>	11	[11u] Add modified test snippet after backport of JDK-8221871	PSU
<a href="#">JDK-8302657</a>	11	[11u] Add missing '(' in makefile after backport of 8218431	PSU
<a href="#">JDK-8302202</a>	20	Incorrect desugaring of null-allowed nested patterns	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8302152</a>	17	Speed up tests with infinite loops, sleep less	PSU
<a href="#">JDK-8301876</a>	20	Crash in DumpTimeClassInfo::add_verification_constraint	PSU
<a href="#">JDK-8301858</a>	20	Verification error when compiling switch with record patterns	PSU
<a href="#">JDK-8301842</a>	17, 11	JFR: increase checkpoint event size for stacktrace and string pool	PSU
<a href="#">JDK-8301760</a>	17, 11, 8	Fix possible leak in SpNegoContext dispose	PSU
<a href="#">JDK-8301620</a>	8	[8u] some shell tests are passed but have unexpected operator errors	PSU
<a href="#">JDK-8301342</a>	17	Prefer ArrayList to LinkedList in LayoutComparator	PSU
<a href="#">JDK-8301332</a>	8	[8u] Fix writing of test files after the cgroups v2 backport	PSU
<a href="#">JDK-8301246</a>	8	NPE in FcFontManager.getDefaultPlatformFont() on Linux without installed fontconfig	PSU

## OpenJFX Bug Fixes

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

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8302294</a>	20, 17, 11, 8	Cherry-pick WebKit 615.1 stabilization fixes	CPU,PSU
<a href="#">JDK-8303501</a>	20, 17, 11, 8	Unable to navigate to relative URLs after fix for JDK-8299781	CPU,PSU
<a href="#">JDK-8300060</a>	20, 17, 11, 8	Improved Webkit support	CPU,PSU
<a href="#">JDK-8296654</a>	20, 17, 11	[macos] Crash when launching JavaFX app with JDK that targets SDK 13	CPU,PSU
<a href="#">JDK-8301712</a>	20, 17, 11, 8	[linux] Crash on exit from WebKit 615.1	CPU,PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8289343</a>	20, 17, 11, 8	Better GL support	CPU,PSU
<a href="#">JDK-8289336</a>	20, 17, 11, 8	Better platform image support	CPU,PSU
<a href="#">JDK-8294779</a>	20, 17, 11, 8	Improve FX pages	CPU,PSU
<a href="#">JDK-8299977</a>	20, 17, 11, 8	Update WebKit to 615.1	CPU,PSU
<a href="#">JDK-8299781</a>	20, 17, 11, 8	Improve JFX navigation	CPU,PSU
<a href="#">JDK-8299628</a>	20, 17, 11, 8	BMP top-down images fail to load after JDK-8289336	CPU,PSU
<a href="#">JDK-8301022</a>	20, 17, 11, 8	Video distortion is observed while playing youtube video	CPU,PSU
<a href="#">JDK-8300954</a>	20, 17, 11, 8	HTML default Range input control not rendered	CPU,PSU
<a href="#">JDK-8292112</a>	20, 17, 11, 8	Better DragView handling	CPU,PSU
<a href="#">JDK-8292105</a>	20, 17, 11, 8	Improve Robot functionality	CPU,PSU
<a href="#">JDK-8292097</a>	20, 17, 11, 8	Better video decoding	CPU,PSU
<a href="#">JDK-8302684</a>	20, 17, 11, 8	Cherry-pick WebKit 615.1 stabilization fixes (2)	CPU,PSU
<a href="#">JDK-8303217</a>	20, 17, 11, 8	Webview loaded webpage is not showing play, volume related buttons for embedded Audio/Video elements	CPU,PSU
<a href="#">JDK-8297362</a>	17	EOS might not be delivered by progressbuffer in some cases	PSU
<a href="#">JDK-8297332</a>	17	Remove easy warnings in javafx.base	PSU
<a href="#">JDK-8297213</a>	17	Robot capture tests should move mouse to corner of screen	PSU
<a href="#">JDK-8297166</a>	17	[TestBug] Fix some ignored unit test from TableViewTest	PSU
<a href="#">JDK-8297130</a>	17	ComboBox popup doesn't close after selecting value that was added with 'runLater'	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8297068</a>	17	Update boot JDK to 19.0.1	PSU
<a href="#">JDK-8297067</a>	17	Update Gradle to 7.6	PSU
<a href="#">JDK-8297042</a>	17	gradle -PBUILD_SDK_FOR_TEST=false fails with gradle 7.6	PSU
<a href="#">JDK-8296854</a>	17	NULL check of CTFontCopyAvailableTables return value is required	PSU
<a href="#">JDK-8296621</a>	17	Stage steals focus on scene change	PSU
<a href="#">JDK-8296592</a>	17	Skip failing test StraightLineTest on Linux	PSU
<a href="#">JDK-8296589</a>	17	PixelBufferDrawTest fails on some systems	PSU
<a href="#">JDK-8296556</a>	17	Mark two RobotTest methods as unstable on HiDPI Windows systems	PSU
<a href="#">JDK-8296413</a>	17, 11	Tree/TableView with null focus model throws NPE in queryAccessibleAttribute()	PSU
<a href="#">JDK-8296409</a>	17	Multiple copies of accelerator change listeners are added to MenuItems, but only 1 is removed	PSU
<a href="#">JDK-8296330</a>	17	Tests: Add layout container snapping tests	PSU
<a href="#">JDK-8296283</a>	17	JUnit5 tests using Params API fails to compile	PSU
<a href="#">JDK-8295962</a>	17	Reference to State in Task.java is ambiguous when building with JDK 19	PSU
<a href="#">JDK-8295809</a>	17	TreeTableViewSkin: memory leak when changing skin	PSU
<a href="#">JDK-8295806</a>	17	TableViewSkin: memory leak when changing skin	PSU
<a href="#">JDK-8295796</a>	17	ScrollPaneSkin: memory leak when changing skin	PSU
<a href="#">JDK-8295755</a>	17, 11, 8	Update SQLite to 3.39.4	PSU
<a href="#">JDK-8295754</a>	17	PaginationSkin: memory leak when changing skin	PSU



OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8295531</a>	17	ComboBoxBaseSkin: memory leak when changing skin	PSU
<a href="#">JDK-8295506</a>	17	ButtonBarSkin: memory leak when changing skin	PSU
<a href="#">JDK-8295500</a>	17	AccordionSkin: memory leak when changing skin	PSU
<a href="#">JDK-8295426</a>	17	MenuButtonSkin: memory leak when changing skin	PSU
<a href="#">JDK-8295339</a>	17	DatePicker updates its value property with wrong date when dialog closes	PSU
<a href="#">JDK-8295327</a>	17	JavaFX - IllegalArgumentException when printing with margins equal to 0	PSU
<a href="#">JDK-8295324</a>	17	JavaFX: Blank pages when printing	PSU
<a href="#">JDK-8295242</a>	17	ScrollBarSkin: memory leak when changing skin	PSU
<a href="#">JDK-8295236</a>	17	Update JavaDoc in javafx.geometry.Point3D	PSU
<a href="#">JDK-8295175</a>	17	SplitPaneSkin: memory leak when changing skin	PSU
<a href="#">JDK-8294809</a>	17	ListenerHelper for managing and disconnecting listeners	PSU
<a href="#">JDK-8294589</a>	17	MenuBarSkin: memory leak when changing skin	PSU
<a href="#">JDK-8294400</a>	17, 11, 8	Provide media support for libavcodec version 59	PSU
<a href="#">JDK-8293971</a>	17, 8	Loading new Media from resources can sometimes fail when loading from FXML	PSU
<a href="#">JDK-8293839</a>	17	Documentation memory consistency effects of runLater	PSU
<a href="#">JDK-8293795</a>	17, 11, 8	[Accessibility] [Win] [Narrator] Exceptions When Deleting Text with Continuous Key Press in TextArea and TextField	PSU
<a href="#">JDK-8293444</a>	17	Creating ScrollPane with same content component causes memory leak	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8293375</a>	17, 11, 8	add_definitions USE_SYSTEM_MALLOC when USE_SYSTEM_MALLOC is ON	PSU
<a href="#">JDK-8293368</a>	17	GitHub Workflows security hardening	PSU
<a href="#">JDK-8293338</a>	17	Enable manually triggering the GitHub workflow	PSU
<a href="#">JDK-8293214</a>	17, 11	Add support for Linux/LoongArch64	PSU
<a href="#">JDK-8293171</a>	17	Minor typographical errors in JavaDoc javafx.scene.control.ScrollPane.java	PSU
<a href="#">JDK-8293119</a>	17	Additional constrained resize policies for Tree/TableView	PSU
<a href="#">JDK-8292922</a>	17	[Linux] No more drag events when new Stage is created in drag handler	PSU
<a href="#">JDK-8292678</a>	17	Openjfx: all projects to use JUnit5 (Eclipse)	PSU
<a href="#">JDK-8292609</a>	17	Cherry-pick WebKit 614.1 stabilization fixes	PSU
<a href="#">JDK-8292549</a>	17, 11	GitHub actions: intermittent build failure on macOS while downloading ant	PSU
<a href="#">JDK-8292391</a>	17	Add support for optional signing of native libraries	PSU
<a href="#">JDK-8292353</a>	17, 11	TableRow vs. TreeTableRow: inconsistent visuals in cell selection mode	PSU
<a href="#">JDK-8292009</a>	17	Wrong text artifacts in table header	PSU
<a href="#">JDK-8291908</a>	17, 11	VirtualFlow creates unneeded empty cells	PSU
<a href="#">JDK-8291853</a>	17	[CSS] ClassCastException in CssStyleHelper calculateValue	PSU
<a href="#">JDK-8291630</a>	17	Update attribution in webkit.md file	PSU
<a href="#">JDK-8291625</a>	17, 11	DialogPane without header nor headerText nor graphic node adds padding to the left of the content pane	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8291087</a>	17, 11	Wrong position of focus of screen reader on Windows with screen scale > 1	PSU
<a href="#">JDK-8290990</a>	17	Clear .root style class from a root node that is removed from a Scene/SubScene	PSU
<a href="#">JDK-8290863</a>	17	Update the documentation of Virtualized controls to include the best practice of not using Nodes directly in the item list	PSU
<a href="#">JDK-8290844</a>	17	Add Skin.install() method	PSU
<a href="#">JDK-8290841</a>	17	Notify menu event after a long press gesture on Android is not dispatched	PSU
<a href="#">JDK-8290530</a>	17	Bump minimum JDK version for JavaFX to JDK 17	PSU
<a href="#">JDK-8290527</a>	17, 11	Bump macOS GitHub actions to macOS 11	PSU
<a href="#">JDK-8290473</a>	17	update Eclipse .classpath in apps, buildSrc	PSU
<a href="#">JDK-8290040</a>	17	Provide simplified deterministic way to manage listeners	PSU
<a href="#">JDK-8289611</a>	17	MouseLocationOnScreenTest sometimes fails on Mac M1	PSU
<a href="#">JDK-8289605</a>	17	Robot capture tests fail intermittently on Mac M1	PSU
<a href="#">JDK-8289542</a>	17, 11, 8	Update JPEG Image Decoding Software to 9e	PSU
<a href="#">JDK-8289541</a>	17, 11, 8	Update ICU4C to 71.1	PSU
<a href="#">JDK-8289397</a>	17	Fix warnings: Possible accidental assignment in place of a comparison. A condition expression should not be reduced to an assignment	PSU
<a href="#">JDK-8289394</a>	17	Fix warnings: Unlikely argument type	PSU
<a href="#">JDK-8289389</a>	17	Fix warnings: type should also implement hashCode() since it overrides Object.equals()	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8289388</a>	17	Fix warnings: method is overriding a synchronized method without being synchronized	PSU
<a href="#">JDK-8289357</a>	17	(Tree)TableView is null in (Tree)TableRowSkin during autosize	PSU
<a href="#">JDK-8288450</a>	17	Update attribution in gstreamer.md file	PSU
<a href="#">JDK-8288449</a>	17	Update attribution in glib.md file	PSU
<a href="#">JDK-8287822</a>	17	[macos] Remove support of duplicated formats from macOS	PSU
<a href="#">JDK-8287604</a>	17	Update MarlinFX to 0.9.4.6	PSU
<a href="#">JDK-8285881</a>	17	Update WebKit to 614.1	PSU
<a href="#">JDK-8285503</a>	17	SwingNodeDnDMemoryLeakTest::testSwingNodeMemoryLeak fails sometimes	PSU
<a href="#">JDK-8284281</a>	17, 11, 8	[Accessibility] [Win] [Narrator] Exceptions with TextArea & TextField when deleted last char	PSU
<a href="#">JDK-8283402</a>	8	Update to gcc 11.2.0 on Linux	PSU
<a href="#">JDK-8282386</a>	17	JavaFX media stubs rely on libav.org	PSU
<a href="#">JDK-8281327</a>	11	JavaFX does not support fonts installed per-user on Windows 10/11	PSU
<a href="#">JDK-8279640</a>	17	ListView with null SelectionModel/FocusModel throws NPE	PSU
<a href="#">JDK-8279514</a>	17	NPE on clearing value of IntegerSpinnerValueFactory	PSU
<a href="#">JDK-8279214</a>	17	Memory leak in Scene after dragging a cell	PSU
<a href="#">JDK-8278426</a>	17	ImagePool uses terminally deprecated System.runFinalization method	PSU
<a href="#">JDK-8276174</a>	8	JavaFX build fails on macOS aarch64	PSU
<a href="#">JDK-8271395</a>	17	Crash during printing when disposing textures	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8268877</a>	17	TextInputControlSkin: incorrect inputMethod event handler after switching skin	PSU
<a href="#">JDK-8265835</a>	17	Exception in Quantum due to null platformWindow	PSU
<a href="#">JDK-8265828</a>	17	[TestBug] Save and restore the default Locale in javafx.base unit test LocalDateTimeStringConverterTest	PSU
<a href="#">JDK-8264536</a>	8	Building OpenJFX on Apple AARCH64 not possible	PSU
<a href="#">JDK-8257758</a>	8	Allow building of JavaFX native libs for Apple Silicon	PSU
<a href="#">JDK-8256397</a>	17	MultipleSelectionModel throws IndexOutOfBoundsException	PSU
<a href="#">JDK-8254676</a>	17, 11	Alert disables Tab selection when TabDragPolicy REORDER is used	PSU
<a href="#">JDK-8252863</a>	17	Spinner keeps spinning if removed from Scene	PSU
<a href="#">JDK-8248551</a>	8	[TestBug] Ignore two failing FXML unit tests which use Nashorn script engine	PSU
<a href="#">JDK-8245145</a>	17	Spinner: throws IllegalArgumentException when replacing skin	PSU
<a href="#">JDK-8243115</a>	17	Spurious invalidations due to bug in IntegerBinding and other classes	PSU
<a href="#">JDK-8238968</a>	17	Inconsistent formatting of Rectangle2D toString method	PSU
<a href="#">JDK-8235491</a>	17, 11	Tree/TableView: implementation of isSelected(int) violates contract	PSU
<a href="#">JDK-8231864</a>	17	JavaFX Labels in Tab's VBox is not displayed until it is clicked	PSU
<a href="#">JDK-8222210</a>	17, 11	JFXPanel popups open at wrong coordinates when using multiple hidpi monitors	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8218826</a>	17	TableRowSkinBase: horizontal layout broken if row has padding	PSU
<a href="#">JDK-8217853</a>	17	Cleanup in the D3D native pipeline	PSU
<a href="#">JDK-8216507</a>	17	StyleablePropertyFactory: example in class javadoc does not compile	PSU
<a href="#">JDK-8215894</a>	8	Provide media support for libav version 58	PSU
<a href="#">JDK-8209017</a>	17	CheckBoxTreeCell: graphic on Treeltem not always showing	PSU
<a href="#">JDK-8206430</a>	17	Use consistent pattern for startup in FX system tests	PSU
<a href="#">JDK-8191446</a>	8	[Linux] Build and deliver the libav media stubs for openjfx build	PSU
<a href="#">JDK-8190411</a>	17	NPE in SliderSkin:140 if Slider.Tooltip.autohide is true	PSU
<a href="#">JDK-8187145</a>	17, 11	(Tree)TableView with null selectionModel: throws NPE on sorting	PSU
<a href="#">JDK-8181084</a>	17	JavaFX show big icons in system menu on macOS with Retina display	PSU
<a href="#">JDK-8149508</a>	8	Performance issue when scrolling ListView due to excess CSS processing	PSU
<a href="#">JDK-8089986</a>	8	Menu beeps when mnemonics is used	PSU
<a href="#">JDK-8089280</a>	17	horizontal scrollbar should never become visible in TableView with constrained resize policy	PSU
<a href="#">JDK-8089009</a>	17, 11	TableView with CONSTRAINED_RESIZE_POLICY incorrectly displays a horizontal scroll bar.	PSU
<a href="#">JDK-8087673</a>	17, 11	[TableView] TableView and TreeTableView menu button overlaps columns when using a constrained resize policy.	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8304098</a>	11	[testbug] Test compilation failure in ControlUtils.java after JDK-8292353	PSU
<a href="#">JDK-8087557</a>	17, 11, 8	[Win] [Accessibility, Dialogs] Alert Dialog content is not fully read by Screen Reader	PSU
<a href="#">JDK-8303026</a>	11	[TextField] IOOBE on setting text with control characters that replaces existing text	PSU
<a href="#">JDK-8301832</a>	17	InputMethodEvents are not enabled for text input controls	PSU
<a href="#">JDK-8301797</a>	17	Pagination control has the wrong size	PSU
<a href="#">JDK-8300893</a>	11	Wrong state after deselecting two or more cells of a TableView selection	PSU
<a href="#">JDK-8300872</a>	11	WebView's ColorChooser fails to initialize when running in security context	PSU
<a href="#">JDK-8300705</a>	17	Update boot JDK to 19.0.2	PSU
<a href="#">JDK-8300664</a>	17	Missing copyright header in ConditionalBinding.java file	PSU
<a href="#">JDK-8300013</a>	17	Node.focusWithin doesn't account for nested focused nodes	PSU
<a href="#">JDK-8298728</a>	17	Cells in VirtualFlow jump after resizing	PSU
<a href="#">JDK-8298496</a>	17	IconifyTest fails intermittently on Linux	PSU
<a href="#">JDK-8298200</a>	17	Clean up raw type warnings in javafx.beans.property.* and com.sun.javafx.property.*	PSU
<a href="#">JDK-8298167</a>	17, 11, 8	Opacity in WebView not working anymore	PSU
<a href="#">JDK-8297680</a>	17	JavaDoc example for PseudoClass has minor typo	PSU
<a href="#">JDK-8297554</a>	17	Remove Scene.KeyHandler	PSU
<a href="#">JDK-8297414</a>	17	Remove easy warnings in javafx.controls	PSU

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
<a href="#">JDK-8297413</a>	17	Remove easy warnings in javafx.graphics	PSU
<a href="#">JDK-8297412</a>	17	Remove easy warnings in javafx.fxml, javafx.media, javafx.swing, javafx.swt and javafx.web	PSU

## Bug Fixes Specific to Azul Zulu Builds of OpenJDK

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

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-46695	8	Update OpenJSSE version to 1.1.12	CPU,PSU
ZULU-47403	8	Update JFX to zulu8u372-b03	PSU
ZULU-47385	11	Update JFX to zulu19.0.3+102	PSU
ZULU-47334	8	zulu8_qnx build fails: duplicate class jdk.internal.platform.SystemMetrics	PSU
ZULU-47333	8	zulu8_arm32hf_cr build fails: #error define sched_setattr for the arch	PSU
ZULU-47182	7	NPE in sun/security/provider/certpath/DisabledAlgorithms/CPBuilder.java and CPBuilderWithMD5.java - subjectPublicKey must be non-null	PSU
ZULU-46871	17	Update JFX to zulu20.0.1+100	PSU
ZULU-46870	11	Update JFX to zulu19.0.3+101	PSU
ZULU-46758	8	Update JFX to zulu8u372-b02	PSU
ZULU-46703	17, 11, 8	Use CRS Agent 1.0.26	PSU
ZULU-46532	8	New test javax/net/ssl/ServerName/EndingDotHostname.java fails on Linux	PSU
ZULU-46521	8	CRaM build failure after ZULU-46513	PSU



Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-46508	8	Add UseThreadAffinities option and priority↯affinity mapping	PSU
ZULU-46507	8	Allow regular users to change java thread priority	PSU
ZULU-46383	8	Zulu 8 QNX-Arm32 fails to build: cannot find SystemMetrics	PSU
ZULU-46376	8	Make GNU_UNIQUE really fatal	PSU
ZULU-45990	11	[TESTBUG] hotspot test gc/g1/TestSharedArchiveWithPreTouch.java fails to compile	PSU
ZULU-45989	8	Checkpoint to bailout if UNIQUE symbol is found and GLIBC is older 2.33	PSU
ZULU-45825	8	[C/R] Biased locking won't be disabled after restore	PSU
ZULU-45697	8	notify first method call from interpreter (x86_32)	PSU
ZULU-45275	11	Solaris build is broken after JDK-8297088	PSU
ZULU-45273	8	GNU_UNIQUE message should be fatal	PSU
ZULU-45268	17, 11, 8	Add sending of VM_METHOD_FIRST_CALLED to all supported JVMs	PSU
ZULU-45266	8	Report link_map dev/ino offset in hs_err	PSU
ZULU-45265	8	Refactor dev/ino offset to be a computable constant	PSU
ZULU-45264	8	Undefine codegen macros after ZULU-42710	PSU
ZULU-45252	8	Library can be confused with loaded one on restore	PSU
ZULU-45242	8	Add deunique to all images and profiles	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-45241	8	JCK8 test "api/java_security/KeyFactory/index.html#RSASSA PSSKeyFactoryTests" failed with "java.security.spec.InvalidKeySpecException: RSAPrivateCrtKeySpec can only be used with CRT keys"	PSU
ZULU-45234	8	CRaM fails to rebuild due to permission issue	PSU
ZULU-45227	8	Disable RSEQ tunable on systems with glibc2.35	PSU
ZULU-45146	8	Build on solaris is broken after JDK-8266391	PSU
ZULU-45012	8	[C/R] FinalReference.enqueue() throws InternalError	PSU
ZULU-45003	17, 11, 8	CRS agent without -XX:+UnlockExperimentalVMOptions/UnlockExperi mentalCRS	PSU
ZULU-44949	8	cr-compat-checker does not check CONFIG_PROC_PAGE_MONITOR or implications	PSU
ZULU-44803	11	Zulu11+CRS should be buildable in docker/ubuntu:18.04	PSU
ZULU-44420	8	Bump criu version to cram-release-4	PSU
ZULU-44403	8	hs_err does not reflect complete -Zrestore configuration	PSU
ZULU-44394	11	New test hotspot/jtreg/compiler/c1/TestBadStateAtLongC mp.java fails against linux-arm32 C2 builds	PSU
ZULU-44264	8	A set of JDK library files are not stripped	PSU
ZULU-44263	8	cr-checker is not stripped	PSU
ZULU-44216	8	Update JFX to zulu8u362-b02	PSU
ZULU-44118	8	Make criu ASLR tolerant	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-44116	8	CR utils are not stripped	PSU
ZULU-44100	8	Update JFX to zulu8u361-b02	PSU
ZULU-43987	17, 11	Update JFX to zulu19.0.2+102	PSU
ZULU-43972	17, 11	Update JFX to zulu19.0.1.0.101+102	PSU
ZULU-43971	17, 11, 8	Update CRS client to version 1.0.11	PSU
ZULU-43437	8	Update release info	PSU
ZULU-43431	8	[C/R] [TESTBUG] SIGPIPE in some azul/cr/cram tests on zulu8.66.0.58	PSU
ZULU-43161	17	jdk/test/jaxp/javax/xml/jaxp/module/ServiceProviderTest/DefaultFactoryWrapperTest.java failed with "Unexpected exit from test [exit code: 1]"	PSU
ZULU-42542	11, 8	Guard compare-exchange code with a barrier	PSU
ZULU-42269	17	builds for linux32 and win-aarch64 are broken after ZULU-39745	PSU
ZULU-42007	8	[C/R] Test azul/cr/cram/AgentNativeState/Test.sh fails - 4 classes loaded when 3 are expected	PSU
ZULU-42006	8	[C/R] Test azul/cr/cram/Jar/Test.sh fails - "Zrestore: parameter is not supported: -jar"	PSU
ZULU-38404	8	Revert ZULU-37530: Reset launcher mode ...	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-19604	8	[fastdebug] azul/cr/cram/ZULU-12343/Test.sh: "criu unable to inject over undupped" assertion failure on restore	PSU

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-47547	7	Failure in java/util/TimeZone/Bug6772689.java - America/Nuuk: got 2038-03-27, expected 2038-03-28	PSU
ZULU-6937	8	Add JVM options to select sched policy for threads	PSU
ZULU-47645	8	Test TestBiasedLockRevocationEvents fails against Arm64 CR builds with "Value not equal to true, field='disableBiasing'"	PSU
ZULU-47640	8	Test OutputRedirect fails with AssertionError	PSU
ZULU-47638	8	Many jtreg/jfr test failures with "Internal Error (os_linux.cpp:4800), ShouldNotReachHere"	PSU
ZULU-47639	8	Test NativeState fails with "Cannot load NODELETE lib"	PSU
ZULU-47189	8	aarch32 can't be compiled in armv7 thumb mode	PSU
ZULU-48302	17	Use CRaC-CRIU 17	PSU
ZULU-48295	17	[CRaC] CRIU does not handle Azure environment correctly	PSU

## Bug Fixes Specific to Azul Zulu Builds of OpenJDK with JavaFX

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

Issue ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-44265	8	Opacity in WebView not working in Zulu8-JFX	PSU
ZULU-43969	17, 11, 8	jfx fails to load top-down bmp images	PSU
ZULU-43905	17, 11, 8	Get libav sources from gitlab instead of libav.org	PSU

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