

# Liberica JDK 21.0.5+11

## Release Notes



Liberica JDK  
21.0.5  
October 16, 2024

**be//soft**

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# Contents

1. Version information	5
------------------------	---

---

2. What's New	6
---------------	---

---

Notable Changes	6
-----------------	---

Builds of Liberica JDK With CRaC	8
----------------------------------	---

IANA TZ Data update	8
---------------------	---

3. Known Issues	10
-----------------	----

---

4. Fixed CVEs	11
---------------	----

---

5. Resolved Issues	12
--------------------	----

---

JDK issues	12
------------	----

JFX issues	36
------------	----

6. Updates to Third Party Libraries	38
-------------------------------------	----

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# 1. Version information

This document provides information about Liberica JDK 21.0.5 release.

The full version string for this update release is 21.0.5+11. The version number is 21.

Liberica JDK 21 is distributed as `.apk`, `.rpm`, `.zip`, `.deb`, and `.tar.gz` packages. Please select the most appropriate for your purposes.

## 2. What's New

This release contains the following updates and new features.

### Notable Changes

This is the list of the notable issues fixed in this release.

Issue ID	
JDK-8332174	<p>Summary: Remove 2 (unpaired) RLO Unicode characters in ff_Adlm.xml</p> <p>Description: This fix removes two illegal-in-CLDR RIGHT-TO-LEFT OVERRIDE Unicode characters from 'make/data/cldr/common/main/ff_Adlm.xml'; these characters are also flagged by one of Red Hat's internal testing tools.</p>
JDK-8333464	<p>Summary: Reduce verbose locale output in -XshowSettings launcher option</p> <p>Description: The '-XshowSettings' launcher command printed all available locales, thus making the output very verbose by default and making it harder to see settings. This level of detail is now printed only if the -XshowSettings:locale subcommand is specified (to print all other locale details, specify -XshowSettings).</p>
JDK-8335156	<p>Summary: Add thread and timestamp options to java.security.debug system property</p> <p>Description: The <code>java.security.debug</code> system property now accepts arguments which add thread ID, thread name, caller information, and timestamp information to debug statements for all components or a specific component. <code>+timestamp</code> can be appended to debug options to print a timestamp for that debug option. <code>+thread</code> can be appended to debug options to print thread and caller information for that debug option.</p>

## Issue ID

JDK-8338074

Summary: `KEM.getInstance()` should check if a 3rd-party security provider is signed

Description: Similar to other JCE crypto services like Cipher, Mac, and KeyAgreement, when a KEM object is instantiated from a 3rd party security provider, it now makes sure the provider is loaded from a signed JAR.

JDK-8339372

Summary: `BasicFileAttributes.creationTime()` falls back to epoch if birth time is unavailable

Description: The change which resolved JDK-8316304 added support for obtaining the file creation time from the birth timestamp. Prior to this change, the last modified time had been returned to the creation time. After this change, if the birth timestamp was unavailable, for example if it was not supported by the file system even though the operating system supported it, then the epoch (0) was returned to the creation time. This could cause problems in situations which relied on the old behavior.

JDK-8339418

Summary: `{ClassLoader,Memory}MXBean::isVerbose` methods are inconsistent with their `setVerbose` methods

Description: The `ClassLoaderMXBean` and `MemoryMXBean` APIs have `setVerbose` methods to control verbose mode and `isVerbose` methods to query it. Some JCK tests expect `setVerbose(false)` to disable verbose mode and, subsequently, `isVerbose()` to return false. However, if logging to a file is enabled by using `-Xlog` on the java launcher command line then `isVerbose()` returned true even after calling `setVerbose(false)`.

**Issue ID**

JDK-8339707      Summary: Distrust TLS server certificates issued after Oct 2024 and anchored by Entrust Root CAs

Description: Google and Mozilla have announced plans to distrust TLS Server certificates issued by Entrust. This enhancement implements similar restrictions in the JDK. The restrictions is enforced in the SunJSSE Provider of the Java Secure Socket Extension (JSSE) API. A TLS session will not be negotiated if the server's certificate chain is anchored by any of the Certificate Authorities specified in this issue and the certificate's notBefore date is after October 31, 2024. If necessary, you can work around the restrictions by removing 'ENTRUST\_TLS' from the 'jdk.security.caDistrustPolicies' security property.

JDK-8341318      Summary: Add 2 SSL.com TLS roots

Description: New SSL.com TLS roots were added as they will be the issuing CA used by Entrust.

JDK-8341319      Summary: Change Entrust TLS distrust date to November 12, 2024

Description: Google has changed their distrust date for Entrust from November 1 to November 12, 2024. Entrust has also changed the date they plan to use SSL.com as the issuing CA for public TLS server certificates to November 12. To align with those updated dates, the distrust date was changed to November 12, 2024.

## Builds of Liberica JDK With CRaC

This release of Liberica JDK includes full CRaC support. CRaC support is available for Liberica JDK 17 and 21. For more information, see [Using CRaC with Java applications](#).

## IANA TZ Data update

This release of Liberica JDK 21.0.5 comes with IANA Time Zone Database version [2024a](#). The following



are the main changes in this update:

Kazakhstan unifies on UTC+5 beginning 2024-03-01. Palestine springs forward a week later after Ramadan. `zic` no longer pretends to support indefinite-past DST. `localtime` no longer mishandles Ciudad Juárez in 2422.

## 3. Known Issues

This release does not contain any known issues.

## 4. Fixed CVEs

This is the list of the security issues fixed in this release. CVSS scores are provided using the CVSS version 3.1 scoring system.

CVE ID	CVSS score	Component	Module	Attack Vector	Complexity	Privileges	User Interaction	Scope	Confidentiality	Integrity	Availability
CVE-2023-42950	7.5	javafx	web	network	high	none	required	unchanged	high	high	high
CVE-2024-21208	3.7	core-libs	java.net	network	high	none	none	unchanged	none	none	low
CVE-2024-21210	3.7	hotspot	compiler	network	high	none	none	unchanged	none	low	none
CVE-2024-21217	3.7	core-libs	java.io.serialization	network	high	none	none	unchanged	none	none	low
CVE-2024-21235	4.8	hotspot	compiler	network	high	none	none	unchanged	low	low	none
CVE-2024-25062	7.5	javafx	web	network	low	none	none	unchanged	none	none	high

# 5. Resolved Issues

## JDK issues

This is the list of general JDK issues fixed in this release.

Issue ID	Summary
JDK-6355567	AdobeMarkerSegment causes failure to read valid JPEG
JDK-6967482	TAB-key does not work in JTables after selecting details-view in JFileChooser
JDK-7022325	TEST_BUG: test/java/util/zip/ZipFile/ReadLongZipFileName.java leaks files if it fails
JDK-8051959	Add thread and timestamp options to java.security.debug system property
JDK-8073061	(fs) Files.copy(foo, bar, REPLACE_EXISTING) deletes bar even if foo is not readable
JDK-8166352	FilePane.createDetailsView() removes JTable TAB, SHIFT-TAB functionality
JDK-8170817	G1: Returning MinTLABSize from unsafe_max_tlab_alloc causes TLAB flapping
JDK-8211847	[aix] java/lang/ProcessHandle/InfoTest.java fails: "reported cputime less than expected"
JDK-8211854	[aix] java/net/ServerSocket/AcceptInheritHandle.java fails: read times out
JDK-8222884	ConcurrentClassDescLookup.java times out intermittently

Issue ID	Summary
JDK-8238169	BasicDirectoryModel getDirectories and DoChangeContents.run can deadlock
JDK-8241550	[macOS] SSLSocketImpl/ReuseAddr.java failed due to "BindException: Address already in use"
JDK-8242564	javadoc crashes:: class cast exception com.sun.tools.javac.code.Symtab\$6
JDK-8260633	[macos] java/awt/dnd/MouseEventAfterStartDragTest/MouseEventAfterStartDragTest.html test failed
JDK-8261433	Better pkcs11 performance for libpkcs11:C_EncryptInit/libpkcs11:C_DecryptInit
JDK-8269428	java/util/concurrent/ConcurrentHashMap/ToArray.java timed out
JDK-8269657	Test java/nio/channels/DatagramChannel/Loopback.java failed: Unexpected message
JDK-8280120	[IR Framework] Add attribute to @IR to enable/disable IR matching based on the architecture
JDK-8280392	java/awt/Focus/NonFocusableWindowTest/NonfocusableOwnerTest.java failed with "RuntimeException: Test failed."
JDK-8280988	[XWayland] Click on title to request focus test failures
JDK-8280990	[XWayland] XTest emulated mouse click does not bring window to front
JDK-8283223	gc/stringdedup/TestStringDeduplicationFullGC.java#Parallel failed with "RuntimeException: String verification failed"
JDK-8287325	AArch64: fix virtual threads with -XX:UseBranchProtection=pac-ret

Issue ID	Summary
JDK-8291809	Convert compiler/c2/cr7200264/TestSSE2IntVect.java to IR verification test
JDK-8294148	Support JSplitPane for instructions and test UI
JDK-8299058	AssertionError in sun.net.httpserver.ServerImpl when connection is idle
JDK-8299487	Test java/net/httpclient/whitebox/SSLTubeTestDriver.java timed out
JDK-8299790	os::print_hex_dump is racy
JDK-8299813	java/nio/channels/DatagramChannel/Disconnect.java fails with jtreg test timeout due to lost datagram
JDK-8301686	TLS 1.3 handshake fails if server_name doesn't match resuming session
JDK-8303920	Avoid calling out to python in DataDescriptorSignatureMissing test
JDK-8305072	Win32ShellFolder2.compareTo is inconsistent
JDK-8305825	getBounds API returns wrong value resulting in multiple Regression Test Failures on Ubuntu 23.04
JDK-8307193	Several Swing jtreg tests use class.forName on L&F classes
JDK-8307352	AARCH64: Improve itable_stub
JDK-8307383	Enhance DTLS connections
JDK-8307778	com/sun/jdi/cds tests fail with jtreg's Virtual test thread factory
JDK-8307788	vmTestbase/gc/gctests/LargeObjects/large003/TestDescription.java timed out
JDK-8308286	Fix clang warnings in linux code

Issue ID	Summary
JDK-8308660	C2 compilation hits 'node must be dead' assert
JDK-8309067	gtest/AsyncLogGtest.java fails again in stderrOutput_vm
JDK-8309621	[XWayland] [Screencast] screen capture failure with sun.java2d.uiScale other than 1
JDK-8309685	Fix -Wconversion warnings in assembler and register code
JDK-8309894	compiler/vectorapi/VectorLogicalOpIdentityTest.java fails on SVE system with UseSVE=0
JDK-8310072	JComboBox/DisabledComboBoxFontTestAuto: Enabled and disabled ComboBox does not match in these LAFs: GTK+
JDK-8310108	Skip ReplaceCriticalClassesForSubgraphs when EnableJVMCI is specified
JDK-8310201	Reduce verbose locale output in -XshowSettings launcher option
JDK-8310334	[XWayland] [Screencast] screen capture error message in debug
JDK-8310628	GcInfoBuilder.c missing JNI Exception checks
JDK-8310683	Refactor StandardCharset/standard.java to use JUnit
JDK-8310906	Fix -Wconversion warnings in runtime, oops and some code header files.
JDK-8311208	Improve CDS Support
JDK-8311306	Test com/sun/management/ThreadMXBean/ThreadCpuTimeArray.java failed: out of expected range
JDK-8311666	Disabled tests in test/jdk/sun/java2d/marlin

Issue ID	Summary
JDK-8311989	Test java/lang/Thread/virtual/Reflection.java timed out
JDK-8312049	runtime/logging/ClassLoadUnloadTest can be improved
JDK-8312111	open/test/jdk/java/awt/Robot/ModifierRobotKey/ModifierRobotKeyTest.java fails on ubuntu 23.04
JDK-8312140	jdk/jshell tests failed with JDI socket timeouts
JDK-8312200	Fix Parse::catch_call_exceptions memory leak
JDK-8312229	Crash involving yield, switch and anonymous classes
JDK-8313674	(fc) java/nio/channels/FileChannel/BlockDeviceSize.java should test for more block devices
JDK-8313697	[XWayland] [Screencast] consequent getPixelColor calls are slow
JDK-8313983	jmod create --target-platform should replace existing ModuleTarget attribute
JDK-8314163	os::print_hex_dump prints incorrectly for big endian platforms and unit sizes larger than 1
JDK-8314225	SIGSEGV in JavaThread::is_lock_owned
JDK-8314515	java/util/concurrent/SynchronousQueue/Fairness.java failed with "Error: fair=false i=8 j=0"
JDK-8314614	jdk/jshell/ImportTest.java failed with "InternalError: Failed remote listen"
JDK-8315024	Vector API FP reduction tests should not test for exact equality
JDK-8315031	YoungPLABSize and OldPLABSize not aligned by ObjectAlignmentInBytes



Issue ID	Summary
JDK-8315422	getSoTimeout() would be in try block in SSLSocketImpl
JDK-8315505	CompileTask timestamp printed can overflow
JDK-8315576	compiler/codecache/CodeCacheFullCountTest.java fails after JDK-8314837
JDK-8315804	Open source several Swing JTabbedPane JTextArea JTextField tests
JDK-8315923	pretouch_memory by atomic-add-0 fragments huge pages unexpectedly
JDK-8315965	Open source various AWT applet tests
JDK-8315969	compiler/rangechecks/TestRangeCheckHoistingScaledIV.java: make flagless
JDK-8316104	Open source several Swing SplitPane and RadioButton related tests
JDK-8316131	runtime/cds/apcads/TestParallelGCWithCDS.java fails with JNI error
JDK-8316193	jdk/jfr/event/oldobject/TestListenerLeak.java java.lang.Exception: Could not find leak
JDK-8316211	Open source several manual applet tests
JDK-8316240	Open source several add/remove MenuBar manual tests
JDK-8316285	Opensource JButton manual tests
JDK-8316306	Open source and convert manual Swing test
JDK-8316328	Test jdk/jfr/event/oldobject/TestSanityDefault.java times out for some heap sizes
JDK-8316361	C2: assert(!failure) failed: Missed optimization opportunity in PhaselterGVN with -XX:VerifyIterativeGVN=10

Issue ID	Summary
JDK-8316389	Open source few AWT applet tests
JDK-8316756	C2 EA fails with "missing memory path" when encountering unsafe_arraycopy stub call
JDK-8317112	Add screenshot for Frame/DefaultSizeTest.java
JDK-8317128	java/nio/file/Files/CopyAndMove.java failed with AccessDeniedException
JDK-8317240	Promptly free OopMapEntry after fail to insert the entry to OopMapCache
JDK-8317288	[macos] java/awt/Window/Grab/GrabTest.java: Press on the outside area didn't cause ungrab
JDK-8317299	safepoint scalarization doesn't keep track of the depth of the JVM state
JDK-8317360	Missing null checks in JfrCheckpointManager and JfrStringPool initialization routines
JDK-8317372	Refactor some NumberFormat tests to use JUnit
JDK-8317446	ProblemList gc/arguments/TestNewSizeFlags.java on macosx-aarch64 in Xcomp
JDK-8317449	ProblemList serviceability/jvmti/stress/StackTrace/NotSuspended/GetStackTraceNotSuspendedStressTest.java on several platforms
JDK-8317635	Improve GetClassFields test to verify correctness of field order
JDK-8317696	Fix compilation with clang-16
JDK-8317738	CodeCacheFullCountTest failed with "VirtualMachineError: Out of space in CodeCache for method handle intrinsic"

Issue ID	Summary
JDK-8317831	compiler/codecache/CheckLargePages.java fails on OL 8.8 with unexpected memory string
JDK-8318071	IgnoreUnrecognizedVMOptions flag still causes failure in ArchiveHeapTestClass
JDK-8318479	[jmh] the test security.CacheBench failed for multiple threads run
JDK-8318605	Enable parallelism in vmTestbase/nsk/stress/stack tests
JDK-8319197	Exclude hb-subset and hb-style from compilation
JDK-8319406	x86: Shorter movptr(reg, imm) for 32-bit immediates
JDK-8319773	Avoid inflating monitors when installing hash codes for LM_LIGHTWEIGHT
JDK-8319793	C2 compilation fails with "Bad graph detected in build_loop_late" after JDK-8279888
JDK-8319817	Charset constructor should make defensive copy of aliases
JDK-8319818	Address GCC 13.2.0 warnings (stringop-overflow and dangling-pointer)
JDK-8320079	The ArabicBox.java test has no control buttons
JDK-8320212	Disable GCC stringop-overflow warning for affected files
JDK-8320379	C2: Sort spilling/unspilling sequence for better ld/st merging into ldp/stp on AArch64
JDK-8320602	Lock contention in SchemaDVFactory.getInstance()
JDK-8320608	Many jtreg printing tests are missing the @printer keyword

Issue ID	Summary
JDK-8320655	awt screencast robot spin and sync issues with native libpipewire api
JDK-8320675	PrinterJob/SecurityDialogTest.java hangs
JDK-8320945	problemlist tests failing on latest Windows 11 update
JDK-8321025	Enable Neoverse N1 optimizations for Neoverse V2
JDK-8321176	[Screencast] make a second attempt on screencast failure
JDK-8321206	Make Locale related system properties <code>StaticProperty</code>
JDK-8321220	JFR: RecordedClass reports incorrect modifiers
JDK-8321278	C2: Partial peeling fails with assert "last_peel ← first_not_peeled"
JDK-8321509	False positive in <code>get_trampoline</code> fast path causes crash
JDK-8321933	TestCDSVMCrash.java spawns two processes
JDK-8322008	Exclude some CDS tests from running with <code>-Xshare:off</code>
JDK-8322062	<code>com/sun/jdi/JdwpAllowTest.java</code> does not performs negative testing with prefix length
JDK-8322330	JavadocHelperTest.java OOMs with Parallel GC and ZGC
JDK-8322726	C2: Unloaded signature class kills argument value
JDK-8322743	C2: prevent lock region elimination in OSR compilation
JDK-8322766	Micro bench <code>SSLHandshake</code> should use default algorithms

Issue ID	Summary
JDK-8322881	java/nio/file/Files/CopyMoveVariations.java fails with AccessDeniedException due to permissions of files in /tmp
JDK-8322971	KEM.getInstance() should check if a 3rd-party security provider is signed
JDK-8322996	BoxLockNode creation fails with assert(reg < CHUNK_SIZE) failed: sanity
JDK-8323122	AArch64: Increase itable stub size estimate
JDK-8323196	jdk/jfr/api/consumer/filestream/TestOrdered.java failed with "Events are not ordered! Reuse = false"
JDK-8323274	C2: array load may float above range check
JDK-8323552	AbstractMemorySegmentImpl#mismatch returns -1 when comparing distinct areas of the same instance of MemorySegment
JDK-8323577	C2 SuperWord: remove AlignVector restrictions on IR tests added in JDK-8305055
JDK-8323584	AArch64: Unnecessary ResourceMark in NativeCall::set_destination_mt_safe
JDK-8323670	A few client tests intermittently throw ConcurrentModificationException
JDK-8323682	C2: guard check is not generated in Arrays.copyOfRange intrinsic when allocation is eliminated by EA
JDK-8323782	Race: Thread::interrupt vs. AbstractInterruptibleChannel.begin
JDK-8323801	<s> tag doesn't strikethrough the text
JDK-8323972	C2 compilation fails with assert(!x->as_Loop()->is_loop_nest_inner_loop()) failed: loop was transformed

Issue ID	Summary
JDK-8324174	assert(m→is_entered(current)) failed: invariant
JDK-8324577	[REDO] - [IMPROVE] OPEN_MAX is no longer the max limit on macOS >= 10.6 for RLIMIT_NOFILE
JDK-8324580	SIGFPE on THP initialization on kernels < 4.10
JDK-8324641	[IR Framework] Add Setup method to provide custom arguments and set fields
JDK-8324668	JDWP process management needs more efficient file descriptor handling
JDK-8324755	Enable parallelism in vmTestbase/gc/gctests/LargeObjects tests
JDK-8324781	runtime/Thread/TestAlwaysPreTouchStacks.java failed with Expected a higher ratio between stack committed and reserved
JDK-8324808	Manual printer tests have no Pass/Fail buttons, instructions close set 3
JDK-8324969	C2: prevent elimination of unbalanced coarsened locking regions
JDK-8324983	Race in CompileBroker::possibly_add_compiler_threads
JDK-8325022	Incorrect error message on client authentication
JDK-8325037	x86: enable and fix hotspot/jtreg/compiler/vectorization/TestRoundVectFloat.java
JDK-8325083	jdk/incubator/vector/Double512VectorTests.java crashes in Assembler::vex_prefix_and_encode
JDK-8325179	Race in BasicDirectoryModel.validateFileCache
JDK-8325218	gc/parallel/TestAlwaysPreTouchBehavior.java fails

Issue ID	Summary
JDK-8325382	(fc) FileChannel.transferTo throws IOException when position equals size
JDK-8325384	sun/security/ssl/SSLSessionImpl/ResumptionUpdateBoundValues.java failing intermittently when main thread is a virtual thread
JDK-8325469	Freeze/Thaw code can crash in the presence of OSR frames
JDK-8325494	C2: Broken graph after not skipping CastII node anymore for Assertion Predicates after JDK-8309902
JDK-8325520	Vector loads and stores with indices and masks incorrectly compiled
JDK-8325542	CTW: Runner can produce negative StressSeed
JDK-8325587	Shenandoah: ShenandoahLock should allow blocking in VM
JDK-8325616	JFR ZGC Allocation Stall events should record stack traces
JDK-8325620	HTMLReader uses ConvertAction instead of specified CharacterAction for <b>, <i>, <u>
JDK-8325754	Dead AbstractQueuedSynchronizer\$ConditionNodes survive minor garbage collections
JDK-8325763	Revert properties: vm.opt.x.*
JDK-8326106	Write and clear stack trace table outside of safepoint
JDK-8326129	Java Record Pattern Match leads to infinite loop
JDK-8326332	Unclosed inline tags cause misalignment in summary tables
JDK-8326717	Disable stringop-overflow in shenandoahLock.cpp

Issue ID	Summary
JDK-8326734	text-decoration applied to <span> lost when mixed with <u> or <s>
JDK-8327007	javax/swing/JSpinner/8008657/bug8008657.java fails
JDK-8327040	Problemlist ActionListenerCalledTwiceTest.java test failing in macos14
JDK-8327137	Add test for ConcurrentModificationException in BasicDirectoryModel
JDK-8327401	Some jtreg tests fail on Wayland without any tracking bug
JDK-8327423	C2 remove_main_post_loops: check if main-loop belongs to pre-loop, not just assert
JDK-8327424	ProblemList serviceability/sa/TestJmapCore.java on all platforms with ZGC
JDK-8327501	Common ForkJoinPool prevents class unloading in some cases
JDK-8327650	Test java/nio/channels/DatagramChannel/StressNativeSignal.java timed out
JDK-8327787	Convert javax/swing/border/Test4129681.java applet test to main
JDK-8327840	Automate javax/swing/border/Test4129681.java
JDK-8327990	[macosx-aarch64] Various tests fail with -XX:+AssertWXAtThreadSync
JDK-8328011	Convert java/awt/Frame/GetBoundsResizeTest/GetBoundsResizeTest.java applet test to main
JDK-8328075	Shenandoah: Avoid forwarding when objects don't move in full-GC
JDK-8328110	Allow simultaneous use of PassFailJFrame with split UI and additional windows
JDK-8328115	Convert java/awt/font/TextLayout/TestJustification.html applet test to main



Issue ID	Summary
JDK-8328158	Convert java/awt/Choice/NonFocusablePopupMenuTest to automatic main test
JDK-8328218	Delete test java/awt/Window/FindOwner/FindOwner.html
JDK-8328234	Remove unused nativeUtils files
JDK-8328238	Convert few closed manual applet tests to main
JDK-8328269	NonFocusablePopupMenuTest.java should be marked as headful
JDK-8328273	sun/management/jmxremote/bootstrap/RmiRegistrySslTest.java failed with java.rmi.server.ExportException: Port already in use
JDK-8328286	Enhance HTTP client
JDK-8328366	Thread.setContextClassLoader from thread in FJP commonPool task no longer works after JDK-8327501
JDK-8328544	Improve handling of vectorization
JDK-8328560	java/awt/event/MouseEvent/ClickDuringKeypress/ClickDuringKeypress.java imports Applet
JDK-8328561	test java/awt/Robot/ManualInstructions/ManualInstructions.java isn't used
JDK-8328642	Convert applet test MouseDraggedOutCauseScrollingTest.html to main
JDK-8328647	TestGarbageCollectorMXBean.java fails with C1-only and -Xcomp
JDK-8328697	SubMenuShowTest and SwallowKeyEvents tests stabilization
JDK-8328726	Better Kerberos support

Issue ID	Summary
JDK-8328785	IOException: Symbol not found: C_GetInterface for PKCS11 interface prior to V3.0
JDK-8328896	Fontmetrics for large Fonts has zero width
JDK-8328953	JEditorPane.read throws ChangedCharSetException
JDK-8328999	Update GIFlib to 5.2.2
JDK-8329004	Update Libpng to 1.6.43
JDK-8329088	Stack chunk thawing races with concurrent GC stack iteration
JDK-8329103	assert(!thread→in_asgct()) failed during multi-mode profiling
JDK-8329126	No native wrappers generated anymore with -XX:-TieredCompilation after JDK-8251462
JDK-8329134	Reconsider TLAB zapping
JDK-8329258	TailCall should not use frame pointer register for jump target
JDK-8329510	Update ProblemList for JFileChooser/8194044/FileSystemRootTest.java
JDK-8329559	Test javax/swing/JFrame/bug4419914.java failed because The End and Start buttons are not placed correctly and Tab focus does not move as expected
JDK-8329665	fatal error: memory leak: allocating without ResourceMark
JDK-8329667	[macos] Issue with JTree related fix for JDK-8317771
JDK-8329995	Restricted access to /proc can cause JFR initialization to crash

Issue ID	Summary
JDK-8330027	Identity hashes of archived objects must be based on a reproducible random seed
JDK-8330063	Upgrade jQuery to 3.7.1
JDK-8330133	libj2pkcs11.so crashes on some pkcs#11 v3.0 libraries
JDK-8330146	assert(!_thread→is_in_any_VTMS_transition()) failed
JDK-8330520	linux clang build fails in os_linux.cpp with static_assert with no message is a C++17 extension
JDK-8330576	ZYoungCompactionLimit should have range check
JDK-8330611	AES-CTR vector intrinsic may read out of bounds (x86_64, AVX-512)
JDK-8330748	ByteArrayOutputStream.writeTo(OutputStream) pins carrier
JDK-8330814	Cleanups for KeepAliveCache tests
JDK-8330819	C2 SuperWord: bad dominance after pre-loop limit adjustment with base that has CastLL after pre-loop
JDK-8330849	Add test to verify memory usage with recursive locking
JDK-8330981	ZGC: Should not dedup strings in the finalizer graph
JDK-8331011	[XWayland] TokenStorage fails under Security Manager
JDK-8331063	Some HttpClient tests don't report leaks
JDK-8331077	nroff man page update for jar tool
JDK-8331142	Add test for number of loader threads in BasicDirectoryModel

Issue ID	Summary
JDK-8331153	JFR: Improve logging of <code>jdk/jfr/api/consumer/filestream/TestOrdered.java</code>
JDK-8331164	<code>createJMHBundle.sh</code> download jars fail when url needed to be redirected
JDK-8331266	Bump update version for OpenJDK: <code>jdk-21.0.5</code>
JDK-8331405	Shenandoah: Optimize ShenandoahLock with TTAS
JDK-8331411	Shenandoah: Reconsider spinning duration in ShenandoahLock
JDK-8331421	<code>ubsan: vmreg.cpp</code> checking error member call on misaligned address
JDK-8331446	Improve deserialization support
JDK-8331495	Limit <code>BasicDirectoryModel/LoaderThreadCount.java</code> to Windows only
JDK-8331518	Tests should not use the "Classpath" exception form of the legal header
JDK-8331572	Allow using <code>OopMapCache</code> outside of STW GC phases
JDK-8331573	Rename <code>CollectedHeap::is_gc_active</code> to be explicitly about STW GCs
JDK-8331575	C2: crash when <code>ConvL2I</code> is split thru phi at <code>LongCountedLoop</code>
JDK-8331605	<code>jdk/test/lib/TestMutuallyExclusivePlatformPredicates.java</code> test failure
JDK-8331626	<code>unsafe.cpp:162:38: runtime error in <code>index_oop_from_field_offset_long</code> - applying non-zero offset 4563897424 to null pointer</code>
JDK-8331714	Make <code>OopMapCache</code> installation lock-free
JDK-8331731	<code>ubsan: relocInfo.cpp:155:30: runtime error: applying non-zero offset to null pointer</code>

Issue ID	Summary
JDK-8331746	Create a test to verify that the cmm id is not ignored
JDK-8331771	ZGC: Remove OopMapCacheAlloc_lock ordering workaround
JDK-8331789	ubsan: deoptimization.cpp:403:29: runtime error: load of value 208, which is not a valid value for type 'bool'
JDK-8331798	Remove unused arg of checkErgonomics() in TestMaxHeapSizeTools.java
JDK-8331854	ubsan: copy.hpp:218:10: runtime error: addition of unsigned offset to 0x7fc2b4024518 overflowed to 0x7fc2b4024510
JDK-8331863	DUIterator_Fast used before it is constructed
JDK-8331885	C2: meet between unloaded and speculative types is not symmetric
JDK-8331931	JFR: Avoid loading regex classes during startup
JDK-8331999	BasicDirectoryModel/LoaderThreadCount.java frequently fails on Windows in CI
JDK-8332008	Enable issuestitle check
JDK-8332113	Update nsk.share.Log to be always verbose
JDK-8332154	Memory leak in SynchronousQueue
JDK-8332174	Remove 2 (unpaired) RLO Unicode characters in ff_Adlm.xml
JDK-8332248	(fc) java/nio/channels/FileChannel/BlockDeviceSize.java failed with RuntimeException
JDK-8332424	Update IANA Language Subtag Registry to Version 2024-05-16

Issue ID	Summary
JDK-8332431	NullPointerException in jTable of SwingSet2
JDK-8332473	ubsan: growableArray.hpp:290:10: runtime error: null pointer passed as argument 1, which is declared to never be null
JDK-8332490	JMH org.openjdk.bench.java.util.zip.InflaterInputStreams.inflaterInputStreamRead OOM
JDK-8332499	Gtest codestrings.validate_vm fail on linux x64 when hsd is present
JDK-8332524	Instead of printing "TLSv1.3," it is showing "TLS13"
JDK-8332589	ubsan: unix/native/libjava/ProcessImpl_md.c:562:5: runtime error: null pointer passed as argument 2, which is declared to never be null
JDK-8332644	Improve graph optimizations
JDK-8332675	test/hotspot/jtreg/gc/testlibrary/Helpers.java compileClass javadoc does not match after 8321812
JDK-8332699	ubsan: jfrEventSetting.inline.hpp:31:43: runtime error: index 163 out of bounds for type 'jfrNativeEventSetting [162]'
JDK-8332717	ZGC: Division by zero in heuristics
JDK-8332720	ubsan: instanceClass.cpp:3550:76: runtime error: member call on null pointer of type 'struct Array'
JDK-8332818	ubsan: archiveHeapLoader.cpp:70:27: runtime error: applying non-zero offset 18446744073707454464 to null pointer
JDK-8332825	ubsan: guardedMemory.cpp:35:11: runtime error: null pointer passed as argument 2, which is declared to never be null

Issue ID	Summary
JDK-8332885	Clarify failure_handler self-tests
JDK-8332894	ubsan: vmError.cpp:2090:26: runtime error: division by zero
JDK-8332898	failure_handler: log directory of commands
JDK-8332903	ubsan: opto/output.cpp:1002:18: runtime error: load of value 171, which is not a valid value for type 'bool'
JDK-8332904	ubsan ppc64le: c1_LIRGenerator_ppc.cpp:581:21: runtime error: signed integer overflow: 9223372036854775807 + 1 cannot be represented in type 'long int'
JDK-8332905	C2 SuperWord: bad AD file, with RotateRightV and first operand not a pack
JDK-8332920	C2: Partial Peeling is wrongly applied for CmpU with negative limit
JDK-8332935	Crash: assert(*lastPtr != 0) failed: Mismatched JNINativeInterface tables, check for new entries
JDK-8332936	Test vmTestbase/metaspace/gc/watermark_70_80/TestDescription.java fails with no GC's recorded
JDK-8332959	C2: ZGC fails with 'Incorrect load shift' when invoking Object.clone() reflectively on an array
JDK-8333088	ubsan: shenandoahAdaptiveHeuristics.cpp:245:44: runtime error: division by zero
JDK-8333093	Incorrect comment in zAddress_aarch64.cpp
JDK-8333099	Missing check for is_LoadVector in StoreNode::Identity

Issue ID	Summary
JDK-8333149	ubsan : memset on nullptr target detected in jvmtiEnvBase.cpp get_object_monitor_usage
JDK-8333178	ubsan: jvmti_tools.cpp:149:16: runtime error: null pointer passed as argument 2, which is declared to never be null
JDK-8333270	HandlersOnComplexResetUpdate and HandlersOnComplexUpdate tests fail with "Unexpected reference" if timeoutFactor is less than 1/3
JDK-8333277	ubsan: mlib_ImageScanPoly.c:292:43: runtime error: division by zero
JDK-8333353	Delete extra empty line in CodeBlob.java
JDK-8333354	ubsan: frame.inline.hpp:91:25: and src/hotspot/share/runtime/frame.inline.hpp:88:29: runtime error: member call on null pointer of type 'const struct SmallRegisterMap'
JDK-8333361	ubsan,test : libHeapMonitorTest.cpp:518:9: runtime error: null pointer passed as argument 2, which is declared to never be null
JDK-8333363	ubsan: instanceClass.cpp: runtime error: member call on null pointer of type 'struct AnnotationArray'
JDK-8333366	C2: CmpU3Nodes are not pushed back to worklist in PhaseCCP leading to non-fixpoint assertion failure
JDK-8333398	Uncomment the commented test in test/jdk/java/util/jar/JarFile/mrjar/MultiReleaseJarAPI.java
JDK-8333462	Performance regression of new DecimalFormat() when compare to jdk11
JDK-8333477	Delete extra empty spaces in Makefiles
JDK-8333542	Breakpoint in parallel code does not work



Issue ID	Summary
JDK-8333622	ubsan: relocInfo_x86.cpp:101:56: runtime error: pointer index expression with base (-1) overflowed
JDK-8333639	ubsan: cppVtables.cpp:81:55: runtime error: index 14 out of bounds for type 'long int [1]'
JDK-8333652	RISC-V: compiler/vectorapi/VectorGatherMaskFoldingTest.java fails when using RVV
JDK-8333716	Shenandoah: Check for disarmed method before taking the nmethod lock
JDK-8333724	Problem list security/infra/java/security/cert/CertPathValidator/certification/CAInterop.java #teliasonerarootcav1
JDK-8333804	java/net/httpclient/ForbiddenHeadTest.java threw an exception with 0 failures
JDK-8333887	ubsan: unsafe.cpp:247:13: runtime error: store to null pointer of type 'volatile int'
JDK-8334078	RISC-V: TestIntVect.java fails after JDK-8332153 when running without RVV
JDK-8334123	log the opening of Type 1 fonts
JDK-8334166	Enable binary check
JDK-8334239	Introduce macro for ubsan method/function exclusions
JDK-8334297	(so) java/nio/channels/SocketChannel/OpenLeak.java should not depend on SecurityManager
JDK-8334332	TestIOException.java fails if run by root
JDK-8334333	MissingResourceCauseTestRun.java fails if run by root

Issue ID	Summary
JDK-8334339	Test java/nio/file/attribute/BasicFileAttributeView/CreationTime.java fails on alinux3
JDK-8334418	Update IANA Language Subtag Registry to Version 2024-06-14
JDK-8334421	assert(!oldbox→is_unbalanced()) failed: this should not be called for unbalanced region
JDK-8334482	Shenandoah: Deadlock when safepoint is pending during nmethods iteration
JDK-8334592	ProblemList serviceability/jvmti/stress/StackTrace/NotSuspended/GetStackTraceNotSuspendedStressTest.java in jdk21 on all platforms
JDK-8334594	Generational ZGC: Deadlock after OopMap rewrites in 8331572
JDK-8334600	TEST java/net/MulticastSocket/IPMulticastIF.java fails on linux-aarch64
JDK-8334618	ubsan: support setting additional ubsan check options
JDK-8334653	ISO 4217 Amendment 177 Update
JDK-8334769	Shenandoah: Move CodeCache_lock close to its use in ShenandoahConcurrentNMethodIterator
JDK-8334867	Add back assertion from JDK-8325494
JDK-8335007	Inline OopMapCache table
JDK-8335134	Test com/sun/jdi/BreakpointOnClassPrepare.java timeout
JDK-8335150	Test LogGeneratedClassesTest.java fails on rpmbuild mock environment
JDK-8335237	ubsan: vtableStubs.hpp is_vtable_stub exclude from ubsan checks

Issue ID	Summary
JDK-8335283	Build failure due to 'no-sanitize' attribute directive ignored
JDK-8335409	Can't allocate and retain memory from resource area in frame::oops_interpreted_do oop closure after 8329665
JDK-8335493	check_gc_overhead_limit should reset SoftRefPolicy::_should_clear_all_soft_refs
JDK-8335536	Fix assertion failure in IdealGraphPrinter when append is true
JDK-8335713	Enhance vectorization analysis
JDK-8335743	jhsdb jstack cannot print some information on the waiting thread
JDK-8335775	Remove extraneous 's' in comment of rawmonitor.cpp test file
JDK-8335904	Fix invalid comment in ShenandoahLock
JDK-8335967	"text-decoration: none" does not work with "A" HTML tags
JDK-8336284	Test TestClhsdbJstackLock.java/TestJhsdbJstackLock.java fails with -Xcomp after JDK-8335743
JDK-8336301	test/jdk/java/nio/channels/AsyncCloseAndInterrupt.java leaves around a FIFO file upon test completion
JDK-8336342	Fix known X11 library locations in sysroot
JDK-8336343	Add more known sysroot library locations for ALSA
JDK-8336926	jdk/internal/util/ReferencedKeyTest.java can fail with ConcurrentModificationException
JDK-8336928	GHA: Bundle artifacts removal broken

Issue ID	Summary
JDK-8337038	Test java/nio/file/attribute/BasicFileAttributeView/CreationTime.java should set as /native
JDK-8337283	configure.log is truncated when build dir is on different filesystem
JDK-8337622	IllegalArgumentException in java.lang.reflect.Field.get
JDK-8337664	Distrust TLS server certificates issued after Oct 2024 and anchored by Entrust Root CAs
JDK-8338139	{ClassLoader,Memory}MXBean::isVerbose methods are inconsistent with their setVerbose methods
JDK-8338286	GHA: Demote x86_32 to hotspot build only
JDK-8338696	(fs) BasicFileAttributes.creationTime() falls back to epoch if birth time is unavailable (Linux)
JDK-8339869	[21u] Test CreationTime.java fails with UnsatisfiedLinkError after 8334339
JDK-8341057	Add 2 SSL.com TLS roots
JDK-8341059	Change Entrust TLS distrust date to November 12, 2024
JDK-8341989	[21u] Back out JDK-8327501 and JDK-8328366

## JFX issues

This is the list of JFX issues fixed in this release.

Issue ID	Summary
JDK-8318841	macOS: Memory leak with MenuItem when Menu.useSystemMenuBar(true) is used
JDK-8319779	SystemMenu: memory leak due to listener never being removed
JDK-8323787	Mac System MenuBar throws IOB exception
JDK-8328994	Update WebKit to 619.1
JDK-8329011	Update SQLite to 3.45.3
JDK-8331765	Websocket callbacks are not executed after WebKit 617.1 update
JDK-8334656	Enable issuetitle check
JDK-8334657	Enable binary check
JDK-8334713	WebKit build failed on LoongArch64 because currentStackPointer is undefined
JDK-8334874	Horizontal scroll events from touchpads should scroll the TabPane tabs
JDK-8335548	testCookieEnabled fails with WebKit 619.1
JDK-8336733	Change JavaFX release version to 21.0.5 in jfx21u

# 6. Updates to Third Party Libraries

This is the list of changes in the third party libraries.

Library	Full name	New Version	Module	JBS
GIFlib	GIFlib	5.2.2	java.desktop	JDK-8328999
jQuery	jQuery	3.7.1	jdk.javadoc	JDK-8330063
Libpng	Libpng	1.6.43	java.desktop	JDK-8329004

# 7. Upgrading to the New Version

To keep your Liberica JDK up-to-date and secure, always upgrade to the newest available version once it is released. To upgrade, install the new version over the previous one. For the installation instructions, see [Liberica JDK Installation Guide](#).



Liberica JDK 21.0.5+11  
Release Notes

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