Liberica JDK 23.0.2+9
Release Notes

bellsoft

Contents

1. Version information

This document provides information about Liberica JDK 23.0.2 release.

The full version string for this update release is 23.0.2+9. The version number is 23.

Liberica JDK 23 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-8337354	Summary: Add explicit non-null return value expectations to Object.toString() Description: An explicit non-null return value expectations were added to Object.toString() method.
JDK-8337359	Summary: MemorySegment::reinterpret removes read-only property Description: The MemorySegment::reinterpret method returned a new memory segment that did not carry over the read-only property of the segment it was create from, but it should have.
JDK-8337360	Summary: Chained builders not sending transformed models to next transforms Description: ClassFile API chained builders did not emit certain elements through downstream transforms and returned wrong builder for chaining.

Issue ID	
JDK-8338163	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-8338914	Summary: BasicFileAttributes.creationTime() falls back to epoch if birth time is unavailable (Linux) 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-8339724	Summary: {ClassLoading,Memory}MXBean::isVerbose methods are inconsistent with their setVerbose methods Description: The ClassLoadingMXBean 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, isVerbose() returned true even after calling setVerbose(false).
JDK-8341129	Summary: Add 2 SSL.com TLS roots Description: New SSL.com TLS roots are added as they are the issuing CA used by Entrust going forward.

Issue ID	
JDK-8341130	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.
JDK-8342297	Summary: Update Timezone Data to 2024b Description: This OpenJDK release upgrades the in-tree copy of the IANA timezone database to 2024b. This timezone update is primarily concerned with improving historical data for Mexico, Mongolia and Portugal. It also makes Asia/Choibalsan an alias for Asia/Ulaanbaatar and makes the MET timezone the same as CET.

Discontinued OS support

Note that Liberica JDK 23.0.2 is not available for and cannot be run on the following operating systems:

- Windows x86 (32-bit)

- macOS 10.x

IANA TZ Data update

This release of Liberica JDK 23.0.2 upgrades the in-tree copy of the IANA timezone database to 2024b. This timezone update is primarily concerned with improving historical data for Mexico, Mongolia and Portugal. It also makes Asia/Choibalsan an alias for Asia/Ulaanbaatar and makes the MET timezone the same as CET.

The 2024b update also makes a number of legacy timezone IDs equal to geographical names rather than fixed offsets, as follows:

- EST → America/Panama instead of -5:00

- MST → America/Phoenix instead of -7:00

- HST → Pacific/Honolulu instead of -10:00

For long-term support releases of Liberica JDK, this change is overridden locally to retain the existing fixed offset mapping.

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-2025-21502	4.8	hotspot	compiler	network	high	none	none	unchanged	low	low	none

5. Resolved Issues

JDK issues

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

Issue ID	Summary
JDK-8028127	Regtest java/security/Security/SynchronizedAccess.java is incorrect
JDK-8302111	Serialization considerations
JDK-8317116	Provide layouts for multiple test UI in PassFailJFrame
JDK-8319933	Disable tests for JDK-8280481 on Graal
JDK-8321509	False positive in get_trampoline fast path causes crash
JDK-8323688	C2: Fix UB of jlong overflow in PhaseIdealLoop::is_counted_loop()
JDK-8324672	Update jdk/java/time/tck/java/time/TCKInstant.java now() to be more robust
JDK-8325937	runtime/handshake/HandshakeDirectTest.java causes "monitor end should be strictly below the frame pointer" assertion failure on AArch64
JDK-8326616	tools/javac/patterns/Exhaustiveness.java intermittently Timeout signalled after 480 seconds
JDK-8328723	IP Address error when client enables HTTPS endpoint check on server socket
JDK-8330045	Enhance array handling

Issue ID	Summary
JDK-8330702	Update failure handler to don't generate Error message if cores actions are empty
JDK-8331391	Enhance the keytool code by invoking the buildTrustedCerts method for essential options
JDK-8332113	Update nsk.share.Log to be always verbose
JDK-8332461	ubsan : dependencies.cpp:906:3: runtime error: load of value 4294967295, which is not a valid value for type 'DepType'
JDK-8332697	ubsan: shenandoahSimpleBitMap.inline.hpp:68:23: runtime error: signed integer overflow: -9223372036854775808 - 1 cannot be represented in type 'long int'
JDK-8332699	ubsan: jfrEventSetting.inline.hpp:31:43: runtime error: index 163 out of bounds for type 'jfrNativeEventSetting [162]'
JDK-8332901	Select{Current,New}ItemTest.java for Choice don't open popup on macOS
JDK-8332903	ubsan: opto/output.cpp:1002:18: runtime error: load of value 171, which is not a valid value for type 'bool'
JDK-8333088	ubsan: shenandoahAdaptiveHeuristics.cpp:245:44: runtime error: division by zero
JDK-8333098	ubsan: bytecodeInfo.cpp:318:59: runtime error: division by zero
JDK-8333248	VectorGatherMaskFoldingTest.java failed when maximum vector bits is 64
JDK-8333277	ubsan: mlib_ImageScanPoly.c:292:43: runtime error: division by zero
JDK-8333306	gc/arguments/TestParallelGCErgo.java fails when largepage are enabled

Issue ID	Summary
JDK-8333317	Test sun/security/pkcs11/sslecc/ClientJSSEServerJSSE.java failed with: Invalid ECDH ServerKeyExchange signature
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: instanceKlass.cpp: runtime error: member call on null pointer of type 'struct AnnotationArray'
JDK-8333391	Test com/sun/jdi/InterruptHangTest.java failed: Thread was never interrupted during sleep
JDK-8333522	JFR SwapSpace event might read wrong free swap space size
JDK-8333639	ubsan: cppVtables.cpp:81:55: runtime error: index 14 out of bounds for type 'long int [1]'
JDK-8333728	ubsan: shenandoahFreeSet.cpp:1347:24: runtime error: division by zero
JDK-8333730	ubsan: FieldIndices/libFieldIndicesTest.cpp:276:11: runtime error: null pointer passed as argument 2, which is declared to never be null
JDK-8333754	Add a Test against ECDSA and ECDH NIST Test vector
JDK-8333791	Fix memory barriers for @Stable fields
JDK-8333824	Unused ClassValue in VarHandles
JDK-8334057	JLinkReproducibleTest.java support receive test.tool.vm.opts

Issue ID	Summary
JDK-8334147	Shenandoah: Avoid taking lock for disabled free set logging
JDK-8334166	Enable binary check
JDK-8334229	Optimize InterpreterOopMap layout
JDK-8334405	java/nio/channels/Selector/SelectWithConsumer.java#id0 failed in testWakeupDuringSelect
JDK-8334482	Shenandoah: Deadlock when safepoint is pending during nmethods iteration
JDK-8334560	[PPC64]: postalloc_expand_java_dynamic_call_sched does not copy all fields
JDK-8334562	Automate com/sun/security/auth/callback/TextCallbackHandler/Default.java test
JDK-8334564	VM startup: fatal error: FLAG_SET_ERGO cannot be used to set an invalid value for NonNMethodCodeHeapSize
JDK-8334567	[test] runtime/os/TestTracePageSizes move ppc handling
JDK-8334618	ubsan: support setting additional ubsan check options
JDK-8334769	Shenandoah: Move CodeCache_lock close to its use in ShenandoahConcurrentNMethodIterator
JDK-8335007	Inline OopMapCache table
JDK-8335142	compiler/c1/TestTraceLinearScanLevel.java occasionally times out with -Xcomp
JDK-8335150	Test LogGeneratedClassesTest.java fails on rpmbuild mock enviroment

Issue ID	Summary
JDK-8335172	Add manual steps to run security/auth/callback/TextCallbackHandler/Password.java test
JDK-8335237	ubsan: vtableStubs.hpp is_vtable_stub exclude from ubsan checks
JDK-8335267	[XWayland] move screencast tokens from .awt to .java folder
JDK-8335283	Build failure due to 'no_sanitize' attribute directive ignored
JDK-8335344	test/jdk/sun/security/tools/keytool/NssTest.java fails to compile
JDK-8335397	Improve reliability of TestRecursiveMonitorChurn.java
JDK-8335428	Enhanced Building of Processes
JDK-8335449	runtime/cds/DeterministicDump.java fails with File content different at byte ...
JDK-8335493	check_gc_overhead_limit should reset SoftRefPolicy::_should_clear_all_soft_refs
JDK-8335530	Java file extension missing in AuthenticatorTest
JDK-8335664	Parsing jsr broken: assert(bci>= 0 && bci < c→method()→code_size()) failed: index out of bounds
JDK-8335709	C2: assert(!loop→is_member(get_loop(useblock))) failed: must be outside loop
JDK-8335713	Enhance vectorization analysis
JDK-8335743	jhsdb jstack cannot print some information on the waiting thread
JDK-8335789	[TESTBUG] XparColor.java test fails with Error. Parse Exception: Invalid or unrecognized bugid: @

Issue ID	Summary
JDK-8335904	Fix invalid comment in ShenandoahLock
JDK-8336148	Test runtime/locking/TestRecursiveMonitorChurn.java failed: Unexpected Inflation
JDK-8336240	Test com/sun/crypto/provider/Cipher/DES/PerformanceTest.java fails with java.lang.ArithmeticException
JDK-8336284	Test TestClhsdbJstackLock.java/TestJhsdbJstackLock.java fails with -Xcomp after JDK-8335743
JDK-8336315	tools/jpackage/windows/WinChildProcessTest.java Failed: Check is calculator process is alive
JDK-8336342	Fix known X11 library locations in sysroot
JDK-8336343	Add more known sysroot library locations for ALSA
JDK-8336363	Update the release version after forking Oct CPU24_10
JDK-8336413	gtk headers : Fix typedef redeclaration of GMainContext and GdkPixbuf
JDK-8336564	Enhance mask blit functionality redux
JDK-8336640	Shenandoah: Parallel worker use in parallel_heap_region_iterate
JDK-8336692	Redo fix for JDK-8284620
JDK-8336854	CAInterop.java#actalisauthenticationrootca conflicted with /manual and /timeout
JDK-8336914	Shenandoah: Missing verification steps after JDK-8255765

Issue ID	Summary
JDK-8336926	jdk/internal/util/ReferencedKeyTest.java can fail with ConcurrentModificationException
JDK-8336928	GHA: Bundle artifacts removal broken
JDK-8336942	Improve test coverage for class loading elements with annotations of different retentions
JDK-8337024	Bump version numbers for 23.0.2
JDK-8337066	Repeated call of StringBuffer.reverse with double byte string returns wrong result
JDK-8337067	Test runtime/classFileParserBug/Bad_NCDFE_Msg.java won't compile
JDK-8337283	configure.log is truncated when build dir is on different filesystem
JDK-8337320	Update ProblemList.txt with tests known to fail on XWayland
JDK-8337331	crash: pinned virtual thread will lead to jvm crash when running with the javaagent option
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-8337753	Target class of upcall stub may be unloaded
JDK-8337780	RISC-V: C2: Change C calling convention for sp to NS
JDK-8337795	Type annotation attached to incorrect type during class reading
JDK-8337810	ProblemList BasicDirectoryModel/LoaderThreadCount.java on Windows

Issue ID	Summary
JDK-8337819	Update GHA JDKs to 22.0.2
JDK-8337876	[IR Framework] Add support for IR tests with @Stable
JDK-8337886	java/awt/Frame/MaximizeUndecoratedTest.java fails in OEL due to a slight color difference
JDK-8337958	Out-of-bounds array access in secondary_super_cache
JDK-8337968	Problem list compiler/vectorapi/VectorRebracket128Test.java
JDK-8337971	Problem list several jvmci tests on linux-riscv64 until JDK-8331704 is fixed
JDK-8337998	CompletionFailure in getEnclosingType attaching type annotations
JDK-8338058	map_or_reserve_memory_aligned Windows enhance remap assertion
JDK-8338101	remove old remap assertion in map_or_reserve_memory_aligned after JDK-8338058
JDK-8338109	java/awt/Mouse/EnterExitEvents/ResizingFrameTest.java duplicate in ProblemList
JDK-8338110	Exclude Fingerprinter::do_type from ubsan checks
JDK-8338112	Test testlibrary_tests/ir_framework/tests/TestPrivilegedMode.java fails with release build
JDK-8338286	GHA: Demote x86_32 to hotspot build only
JDK-8338380	Update TLSCommon/interop/AbstractServer to specify an interface to listen for connections
JDK-8338389	[JFR] Long strings should be added to the string pool

Issue ID	Summary
JDK-8338402	GHA: some of bundles may not get removed
JDK-8338696	(fs) BasicFileAttributes.creationTime() falls back to epoch if birth time is unavailable (Linux)
JDK-8338751	ConfigureNotify behavior has changed in KWin 6.2
JDK-8338759	Add extra diagnostic to java/net/InetAddress/ptr/Lookup.java
JDK-8338924	C1: assert(0 ⇐ i && i < _len) failed: illegal index 5 for length 5
JDK-8339154	Cleanups and JUnit conversion of test/jdk/java/util/zip/Available.java
JDK-8339180	Enhanced Building of Processes: Follow-on Issue
JDK-8339248	RISC-V: Remove li64 macro assembler routine and related code
JDK-8339384	Unintentional IOException in jdk.jdi module when JDWP end of stream occurs
JDK-8339386	Assertion on AIX - original PC must be in the main code section of the compiled method
JDK-8339416	[s390x] Provide implementation for resolve_global_jobject
JDK-8339487	ProcessHandleImpl os_getChildren sysctl call - retry in case of ENOMEM and enhance exception message
JDK-8339548	GHA: RISC-V: Use Debian snapshot archive for bootstrap
JDK-8339560	Unaddressed comments during code review of JDK-8337664
JDK-8339591	Mark jdk/jshell/ExceptionMessageTest.java intermittent
JDK-8339637	(tz) Update Timezone Data to 2024b

Issue ID	Summary
JDK-8339644	Improve parsing of Day/Month in tzdata rules
JDK-8339648	ZGC: Division by zero in rule_major_allocation_rate
JDK-8339725	Concurrent GC crashed due to GetMethodDeclaringClass
JDK-8339731	java.desktop/share/classes/javax/swing/text/html/default.css typo in margin settings
JDK-8339741	RISC-V: C ABI breakage for integer on stack
JDK-8339787	Add some additional diagnostic output to java/net/ipv6tests/UdpTest.java
JDK-8339803	Acknowledge case insensitive unambiguous keywords in tzdata files
JDK-8340007	Refactor KeyEvent/FunctionKeyTest.java
JDK-8340008	KeyEvent/KeyTyped/Numpad1KeyTyped.java has 15 seconds timeout
JDK-8340073	Support "%z" time zone abbreviation format in TZ files
JDK-8340109	Ubsan: ciEnv.cpp:1660:65: runtime error: member call on null pointer of type 'struct CompileTask'
JDK-8340210	Add positionTestUI() to PassFailJFrame.Builder
JDK-8340214	C2 compilation asserts with "no node with a side effect" in PhaseIdealLoop::try_sink_out_of_loop
JDK-8340230	Tests crash: assert(is_in_encoding_range || k→is_interface() || k→is_abstract()) failed: sanity
JDK-8340306	Add border around instructions in PassFailJFrame

Issue ID	Summary
JDK-8340308	PassFailJFrame: Make rows default to number of lines in instructions
JDK-8340313	Crash due to invalid oop in nmethod after C1 patching
JDK-8340365	Position the first window of a window list
JDK-8340383	VM issues warning failure to find kernel32.dll on Windows nanoserver
JDK-8340387	Update OS detection code to recognize Windows Server 2025
JDK-8340398	[JVMCI] Unintuitive behavior of UseJVMCICompiler option
JDK-8340418	GHA: MacOS AArch64 bundles can be removed prematurely
JDK-8340461	Amend description for logArea
JDK-8340466	Add description for PassFailJFrame constructors
JDK-8340586	JdkJfrEvent::get_all_klasses stores non-strong oops in JNI handles
JDK-8340590	RISC-V: C2: Small improvement to vector gather load and scatter store
JDK-8340657	[PPC64] SA determines wrong unextendedSP
JDK-8340684	Reading from an input stream backed by a closed ZipFile has no test coverage
JDK-8340785	Update description of PassFailJFrame and samples
JDK-8340799	Add border inside instruction frame in PassFailJFrame
JDK-8340804	doc/building.md update Xcode instructions to note that full install is required
JDK-8340812	LambdaForm customization via MethodHandle::updateForm is not thread safe

Issue ID	Summary
JDK-8340815	Add SECURITY.md file
JDK-8340824	C2: Memory for TypeInterfaces not reclaimed by hashcons()
JDK-8340899	Remove wildcard bound in PositionWindows.positionTestWindows
JDK-8340923	The class LogSelection copies uninitialized memory
JDK-8341024	[test] build/AbsPathsInImage.java fails with OOM when using ubsan-enabled binaries
JDK-8341057	Add 2 SSL.com TLS roots
JDK-8341059	Change Entrust TLS distrust date to November 12, 2024
JDK-8341127	Extra call to MethodHandle::asType from memory segment var handles fails to inline
JDK-8341146	RISC-V: Unnecessary fences used for load-acquire in template interpreter
JDK-8341235	Improve default instruction frame title in PassFailJFrame
JDK-8341261	Tests assume UnlockExperimentalVMOptions is disabled by default
JDK-8341554	Shenandoah: Missing heap lock when updating usage for soft ref policy
JDK-8341562	RISC-V: Generate comments in -XX:+PrintInterpreter to link to source code
JDK-8341658	RISC-V: Test DateFormatProviderTest.java run timeouted
JDK-8341668	Shenandoah: assert(tail_bits < (idx_t)BitsPerWord) failed: precondition
JDK-8341688	Aarch64: Generate comments in -XX:+PrintInterpreter to link to source code

Issue ID	Summary
JDK-8341709	Change milestone to ea for JDK23.0.2
JDK-8341806	Gcc version detection failure on Alinux3
JDK-8341881	[REDO] java/nio/file/attribute/BasicFileAttributeView/CreationTime.java#tmp fails on alinux3
JDK-8341966	Broken annotated module may lead to an exception in javac
JDK-8341997	Tests create files in src tree instead of scratch dir
JDK-8342014	RISC-V: ZStoreBarrierStubC2 clobbers rflags
JDK-8342114	Change milestone to fcs for all releases
JDK-8342145	File libCreationTimeHelper.c compile fails on Alpine
JDK-8342489	compiler/c2/irTests/TestVectorizationMismatchedAccess.java fails on big-endian platforms
JDK-8342496	C2/Shenandoah: SEGV in compiled code when running jcstress
JDK-8342612	Increase memory usage of compiler/c2/TestScalarReplacementMaxLiveNodes.java
JDK-8342681	TestLoadBypassesNullCheck.java fails improperly specified VM option
JDK-8342701	[PPC64] TestOSRLotsOfLocals.java crashes
JDK-8342905	Thread.setContextClassloader from thread in FJP commonPool task no longer works after JDK-8327501 redux
JDK-8342962	[s390x] TestOSRLotsOfLocals.java crashes

JFX issues

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

Issue ID	Summary
JDK-8333374	Cannot invoke "com.sun.prism.RTTexture.contentsUseful()" because "this.txt" is null
JDK-8335469	[XWayland] crash when an AWT ScreenCast session overlaps with an FX ScreenCast session
JDK-8335714	Enhance playing MP3s
JDK-8335715	Improve Direct Show support
JDK-8337827	[XWayland] Skip failing tests on Wayland
JDK-8339247	Create release notes for JavaFX 23
JDK-8339848	Change JavaFX release version to 23.0.2 in jfx23u
JDK-8340208	Additional WebKit 619.1 fixes from WebKitGTK 2.44.4
JDK-8340954	Add SECURITY.md file
JDK-8341686	FX: Update copyright year in docs, readme files to 2025
JDK-8341911	Create release notes for JavaFX 23.0.1
JDK-8341920	Intermittent WebKit build failure on Windows generating PDB files in 619.1
JDK-8342917	GHA: Intermittent build failure on Linux while downloading ant
JDK-8343630	Pass AccessControlContext to/from WebKit as opaque object

Issue ID	Summary	26
JDK-8343760	GHA: macOS / aarch64 builds depend on Xcode 14 which will be removed	

6. Updates to Third Party Libraries

This release does not contain any changes in the third party libraries.

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.

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