

Liberica JDK 22.0.2+11

Release Notes



Liberica JDK
22.0.2
July 16, 2024

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1. Version information

This document provides information about Liberica JDK 22.0.2 release.

The full version string for this update release is 22.0.2+11. The version number is 22.

Liberica JDK 22 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-8329683	<p>Summary: Fallback option for POST-only OCSP requests</p> <p>Description: Extensive use of GET requests may result in unpredicted behavior with some systems. Now you can set <code>USE_GET</code> to <code>false</code> to use POST requests.</p>
JDK-8329792	<p>Summary: Inconsistent behavior in <code>com.sun.jndi.ldap.Connection::createSocket</code></p> <p>Description: <code>SocketFactory</code> now checks what socket is created. Unconnected sockets are not supported. If an unconnected socket is created, it throws a <code>SocketException</code> in <code>SocketFactory::createSocket()</code>. The documentation was also corrected.</p>
JDK-8330870	<p>Summary: <code>dpkg</code> appears to have problems resolving symbolically linked native libraries</p> <p>Description: Native libraries linked with symbolic links now correctly processed by <code>dpkg</code>.</p>
JDK-8332409	<p>Summary: Add GlobalSign 2 TLS root certificates</p> <p>Description: GlobalSign Root R46 and GlobalSign Root E46 root certificates were added.</p>

Discontinued OS support

Note that Liberica JDK 22.0.2 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 22.0.2 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 is the list of known issues in this release.

Issue ID	
JDK-8322567	<p>Summary: Increased Startup Time when Using <code>-XX:StartFlightRecording</code></p> <p>Description: A noticeable 10% increase in startup time can be observed when using the <code>-XX:StartFlightRecording</code> option with smaller applications.</p> <p>Workaround: N/A</p>
JDK-8325737	<p>Summary: <code>Files.readString</code> may return incorrect String when UTF-16 or other Charsets</p> <p>Description: Strings read with <code>java.nio.files.Files.readString</code> may return incorrect strings when decoding with a Charset other than US-ASCII, ISO08859-1, or UTF-8. Reading strings with other multi-byte charsets such as UTF_16 may produce incorrect results.</p> <p>Workaround: Run the JDK 22 GA build with <code>-XX:-CompactStrings</code> option to disable the use of 'Compact Strings'.</p>
N/A	<p>Summary: LibericaFX and EGL on Raspbian</p> <p>Description: As of 2017, the default location of Broadcom <code>libEGL.so</code> and <code>libGLESv2.so</code> has changed in Raspbian OS.</p> <p>Workaround: To leverage hardware EGL acceleration available from Broadcom video drivers in LibericaFX while running a recent Raspbian OS, run the following commands: 1. <code>cd /opt/vc/lib</code>, 2. <code>sudo ln -s libbrcmEGL.so libEGL.so</code>, 3. <code>sudo ln -s libbrcmGLESv2.so libGLESv2.so</code></p>

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-2024-21131	3.7	hotspot	runtime	network	high	none	none	unchanged	none	low	none
CVE-2024-21138	3.7	hotspot	runtime	network	high	none	none	unchanged	none	none	low
CVE-2024-21140	4.8	hotspot	compiler	network	high	none	none	unchanged	low	low	none
CVE-2024-21145	4.8	client-libs	2d	network	high	none	none	unchanged	low	low	none
CVE-2024-21147	7.4	hotspot	compiler	network	high	none	none	unchanged	high	high	none

5. Resolved Issues

JDK issues

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

Issue ID	Summary
JDK-8185862	AWT Assertion Failure in ::GetDIBits(hBMDC, hBM, 0, 1, 0, gpBitmapInfo, 0) 'awt_Win32GraphicsDevice.cpp', at line 185
JDK-8187759	Background not refreshed when painting over a transparent JFrame
JDK-8238169	BasicDirectoryModel getDirectories and DoChangeContents.run can deadlock
JDK-8261433	Better pkcs11 performance for libpkcs11:C_EncryptInit/libpkcs11:C_DecryptInit
JDK-8295111	dpkg appears to have problems resolving symbolically linked native libraries
JDK-8305072	Win32ShellFolder2.compareTo is inconsistent
JDK-8309218	java/util/concurrent/locks/Lock/OOMEInAQS.java still times out with ZGC, Generational ZGC, and SerialGC
JDK-8310072	JComboBox/DisabledComboBoxFontTestAuto: Enabled and disabled ComboBox does not match in these LAFs: GTK+
JDK-8310513	[s390x] Intrinsicify recursive ObjectMonitor locking
JDK-8312383	Log X509ExtendedKeyManager implementation class name in TLS/SSL connection

Issue ID	Summary
JDK-8314794	Improve UTF8 String supports
JDK-8316138	Add GlobalSign 2 TLS root certificates
JDK-8316328	Test jdk/jfr/event/oldobject/TestSanityDefault.java times out for some heap sizes
JDK-8319548	Unexpected internal name for Filler array klass causes error in VisualVM
JDK-8319859	Better symbol storage
JDK-8320005	Allow loading of shared objects with .a extension on AIX
JDK-8320097	Improve Image transformations
JDK-8320548	Improved loop handling
JDK-8320692	Null icon returned for .exe without custom icon
JDK-8320707	Virtual thread test updates
JDK-8321075	RISC-V: UseSystemMemoryBarrier lacking proper OS support
JDK-8322078	ZipSourceCache.testKeySourceMapping() test fails with The process cannot access the file because it is being used by another process
JDK-8322484	22-b26 Regression in J2dBench-bimg_misc-G1 (and more) on Windows-x64 and macOS-x64
JDK-8322503	Shenandoah: Clarify gc state usage
JDK-8322726	C2: Unloaded signature class kills argument value
JDK-8322943	runtime/CompressedOops/CompressedClassPointers.java fails on AIX

Issue ID	Summary
JDK-8322962	Upcall stub might go undetected when freezing frames
JDK-8323231	Improve array management
JDK-8323390	Enhance mask blit functionality
JDK-8323519	Add applications/ctw/modules to Hotspot tiered testing
JDK-8323552	AbstractMemorySegmentImpl#mismatch returns -1 when comparing distinct areas of the same instance of MemorySegment
JDK-8323670	A few client tests intermittently throw ConcurrentModificationException
JDK-8323685	PrintSystemDictionaryAtExit has mutex rank assert
JDK-8323782	Race: Thread::interrupt vs. AbstractInterruptibleChannel.begin
JDK-8323801	<s> tag doesn't strikethrough the text
JDK-8324121	SIGFPE in PhaseldealLoop::extract_long_range_checks
JDK-8324243	Compilation failures in java.desktop module with gcc 14
JDK-8324559	Improve 2D image handling
JDK-8324632	Update Zlib Data Compression Library to Version 1.3.1
JDK-8324646	Avoid Class.forName in SecureRandom constructor
JDK-8324648	Avoid NoSuchMethodError when instantiating NativePRNG
JDK-8324733	[macos14] Problem list tests which fail due to macOS bug described in JDK-8322653

Issue ID	Summary
JDK-8324834	Use <code>_LARGE_FILES</code> on AIX
JDK-8324874	AArch64: crypto pmull based CRC32/CRC32C intrinsics clobber V8-V15 registers
JDK-8324933	ConcurrentHashMap::statistics_calculate synchronization is expensive
JDK-8325028	(ch) Pipe channels should lazily set socket to non-blocking mode on first use by virtual thread
JDK-8325095	C2: bailout message broken: ResourceArea allocated string used after free
JDK-8325179	Race in BasicDirectoryModel.validateFileCache
JDK-8325255	jdk.internal.util.ReferencedKeySet::add using wrong test
JDK-8325313	Header format error in TestIntrinsicBailOut after JDK-8317299
JDK-8325432	enhance assert message "relocation addr must be in this section"
JDK-8325567	jspawnhelper without args fails with segfault
JDK-8325579	Inconsistent behavior in com.sun.jndi.ldap.Connection::createSocket
JDK-8325587	Shenandoah: ShenandoahLock should allow blocking in VM
JDK-8325600	Better symbol storage
JDK-8325613	CTW: Stale method cleanup requires GC after Sweeper removal
JDK-8325621	Improve jspawnhelper version checks
JDK-8325730	StringBuilder.toString allocation for the empty String

Issue ID	Summary
JDK-8325743	test/jdk/java/nio/channels/unixdomain/SocketOptions.java enhance user name output in error case
JDK-8325763	Revert properties: vm.opt.x.*
JDK-8325862	set -XX:+ErrorFileToStderr when executing java in containers for some container related jtreg tests
JDK-8326106	Write and clear stack trace table outside of safepoint
JDK-8326112	Javadoc snippet for Linker.Option.captureCallState is wrong
JDK-8326140	src/jdk.accessibility/windows/native/libjavaaccessbridge/AccessBridgeJavaEntryPoints.cpp ReleaseStringChars might be missing in early returns
JDK-8326201	[S390] Need to bailout cleanly if creation of stubs fails when code cache is out of space
JDK-8326351	Update the Zlib version in open/src/java.base/share/legal/zlib.md to 1.3.1
JDK-8326446	The User and System of jdk.CPULoad on Apple M1 are inaccurate
JDK-8326496	[test] checkHsErrFileContent support printing hserr in error case
JDK-8326521	JFR: CompilerPhase event test fails on windows 32 bit
JDK-8326529	JFR: Test for CompilerCompile events fails due to time out
JDK-8326643	JDK server does not send a dummy change_cipher_spec record after HelloRetryRequest message
JDK-8326891	Prefer RPATH over RUNPATH for \$ORIGIN rpaths in internal JDK binaries
JDK-8326936	RISC-V: Shenandoah GC crashes due to incorrect atomic memory operations

Issue ID	Summary
JDK-8326960	GHA: RISC-V sysroot cannot be debootstrapped due to ongoing Debian t64 transition
JDK-8326974	ODR violation in macroAssembler_aarch64.cpp
JDK-8327040	Problemlist ActionListenerCalledTwiceTest.java test failing in macos14
JDK-8327059	os::Linux::print_proc_sys_info add swappiness information
JDK-8327137	Add test for ConcurrentModificationException in BasicDirectoryModel
JDK-8327391	Add SipHash attribution file
JDK-8327413	Enhance compilation efficiency
JDK-8327467	Bump version numbers for 22.0.2
JDK-8327468	Do not restart close if errno is EINTR [macOS/linux]
JDK-8327501	Common ForkJoinPool prevents class unloading in some cases
JDK-8327631	Update IANA Language Subtag Registry to Version 2024-03-07
JDK-8327990	[macosx-aarch64] Various tests fail with -XX:+AssertWXAtThreadSync
JDK-8328066	WhiteBoxResizeTest failure on linux-x86: Could not reserve enough space for 2097152KB object heap
JDK-8328075	Shenandoah: Avoid forwarding when objects don't move in full-GC
JDK-8328165	improve assert(idx < _maxlrg) failed: oob
JDK-8328166	Epsilon: 'EpsilonHeap::allocate_work' misuses the parameter 'size' as size in bytes

Issue ID	Summary
JDK-8328168	Epsilon: Premature OOM when allocating object larger than uncommitted heap size
JDK-8328316	Finisher cannot emit if stream is sequential and integrator returned false
JDK-8328366	Thread.setContextClassLoader from thread in FJP commonPool task no longer works after JDK-8327501
JDK-8328524	[x86] StringRepeat.java failure on linux-x86: Could not reserve enough space for 2097152KB object heap
JDK-8328589	unify os::breakpoint among posix platforms
JDK-8328604	remove on_aix() function
JDK-8328638	Fallback option for POST-only OCSP requests
JDK-8328702	C2: Crash during parsing because sub type check is not folded
JDK-8328703	Illegal accesses in Java_jdk_internal_org_jline_terminal_impl_jna_linux_CLibraryImpl_ioctl0
JDK-8328705	GHA: Cross-compilation jobs do not require build JDK
JDK-8328709	AIX os::get_summary_cpu_info support Power 10
JDK-8328744	Parallel: Parallel GC throws OOM before heap is fully expanded
JDK-8328776	[AIX] remove checked_vmgetinfo, use vmgetinfo directly
JDK-8328812	Update and move siphash license
JDK-8328822	C2: "negative trip count?" assert failure in profile predicate code

Issue ID	Summary
JDK-8328825	Google CAInterop test failures
JDK-8328948	GHA: Restoring sysroot from cache skips the build after JDK-8326960
JDK-8328953	JEditorPane.read throws ChangedCharSetException
JDK-8328988	[macos14] Problem list LightweightEventTest.java which fails due to macOS bug described in JDK-8322653
JDK-8328997	Remove unnecessary template parameter lists in GrowableArray
JDK-8329013	StackOverflowError when starting Apache Tomcat with signed jar
JDK-8329109	Threads::print_on() tries to print CPU time for terminated GC threads
JDK-8329134	Reconsider TLAB zapping
JDK-8329163	C2: possible overflow in PhaseldealLoop::extract_long_range_checks()
JDK-8329213	Better validation for com.sun.security.ocsp.useget option
JDK-8329223	Parallel: Parallel GC resizes heap even if -Xms = -Xmx
JDK-8329510	Update ProblemList for JFileChooser/8194044/FileSystemRootTest.java
JDK-8329528	G1 does not update TAMS correctly when dropping retained regions during Concurrent Start pause
JDK-8329545	[s390x] Fix garbage value being passed in Argument Register
JDK-8329570	G1: Excessive is_obj_dead_cond calls in verification
JDK-8329605	hs errfile generic events - move memory protections and nmethod flushes to separate sections

Issue ID	Summary
JDK-8329656	assertion failed in MAP_ARCHIVE_MMAP_FAILURE path: Invalid immediate -5 0
JDK-8329663	hs_err file event log entry for thread adding/removing should print current thread
JDK-8329823	RISC-V: Need to sync CPU features with related JVM flags
JDK-8329840	Fix ZPhysicalMemorySegment::_end type
JDK-8329850	[AIX] Allow loading of different members of same shared library archive
JDK-8329862	libjli GetApplicationHome cleanups and enhance jli tracing
JDK-8329958	Windows x86 build fails: downcallLinker.cpp(36) redefinition
JDK-8329961	Buffer overflow in os::Linux::kernel_version
JDK-8330011	[s390x] update block-comments to make code consistent
JDK-8330027	Identity hashes of archived objects must be based on a reproducible random seed
JDK-8330094	RISC-V: Save and restore FRM in the call stub
JDK-8330156	RISC-V: Range check auipc + signed 12 imm instruction
JDK-8330176	Typo in Linker javadoc
JDK-8330242	RISC-V: Simplify and remove CORRECT_COMPILER_ATOMIC_SUPPORT in atomic_linux_riscv.hpp
JDK-8330275	Crash in XMark::follow_array

Issue ID	Summary
JDK-8330464	hserr generic events - add entry for the before_exit calls
JDK-8330523	Reduce runtime and improve efficiency of KeepAliveTest
JDK-8330524	Linux ppc64le compile warning with clang in os_linux_ppc.cpp
JDK-8330576	ZYoungCompactionLimit should have range check
JDK-8330611	AES-CTR vector intrinsic may read out of bounds (x86_64, AVX-512)
JDK-8330615	avoid signed integer overflows in zip_util.c readCen / hashN
JDK-8330748	ByteArrayOutputStream.writeTo(OutputStream) pins carrier
JDK-8330814	Cleanups for KeepAliveCache tests
JDK-8330815	Use pattern matching for instanceof in KeepAliveCache
JDK-8331031	unify os::dont_yield and os::naked_yield across Posix platforms
JDK-8331164	createJMHBundle.sh download jars fail when url needed to be redirected
JDK-8331167	UBSan enabled build fails in adlc on macOS
JDK-8331298	avoid alignment checks in UBSAN enabled build
JDK-8331331	:tier1 target explanation in doc/testing.md is incorrect
JDK-8331344	No compiler replay file with CompilerCommand MemLimit
JDK-8331352	error: template-id not allowed for constructor/destructor in C++20
JDK-8331466	Problemist serviceability/dcmd/gc/RunFinalizationTest.java on generic-all

Issue ID	Summary
JDK-8331714	Make OopMapCache installation lock-free
JDK-8331746	Create a test to verify that the cmm id is not ignored
JDK-8331885	C2: meet between unloaded and speculative types is not symmetric
JDK-8331894	[jdk22] compiler/print/CompileCommandMemLimit.java fails after backporting JDK-8325095
JDK-8331942	On Linux aarch64, CDS archives should be using 64K alignment by default
JDK-8332253	Linux arm32 build fails after 8292591
JDK-8332490	JMH org.openjdk.bench.java.util.zip.InflaterInputStreams.inflaterInputStreamRead OOM
JDK-8333093	Incorrect comment in zAddress_aarch64.cpp

JFX issues

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

Issue ID	Summary
JDK-8322251	[Linux] JavaFX is not displaying CJK on Ubuntu 23.10 and later
JDK-8324326	Update ICU4C to 74.2
JDK-8327979	Change JavaFX release version to 22.0.2 in jfx22u

Issue ID	Summary
JDK-8328136	Create release notes for JavaFX 22
JDK-8328749	Remove unused imports in javafx.web
JDK-8328752	Fix missing @Overrides in javafx.web
JDK-8329011	Update SQLite to 3.45.3
JDK-8329705	Add missing Application thread checks to platform specific a11y methods
JDK-8329794	Create release notes for JavaFX 22.0.1
JDK-8330462	StringIndexOutOfBoundsException when typing anything into TextField
JDK-8331748	Update libxml2 to 2.12.6
JDK-8332328	[GHA] GitHub Actions build fails on Linux: unable to find gcc-13
JDK-8332539	Update libxml2 to 2.12.7

6. Updates to Third Party Libraries

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

Library	Full name	New Version	Module	JBS
ICU4C	ICU4C	74.2	javafx	JDK-8324326
Zlib	Zlib Data Compression Library	1.3.1	java.base	JDK-8324632

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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