

Liberica JDK 11.0.22+12

Release Notes



Liberica JDK
11.0.22
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1. Introduction

This document provides the late-breaking information about Liberica JDK 11.0.22 release.

The full version string for this update release is 11.0.22+12. The version number is 11.

2. Liberica JDK 11.0.22+12

Liberica is a certified, Java SE 11-compliant distribution of OpenJDK 11, which works on server (Linux x86_64, Linux ARM64, Windows 64), desktop (Windows 64, Mac, Linux x86_64), and embedded devices (Linux ARM64, Linux ARMv7, including Raspberry Pi 2 & 3 (ARMv6 hardfloat)). It has the following notable additions:

- Linux x86_64 version contains support for ZGC.
- Linux x86_64, ARMv8 and ARMv7 distributions include a choice of Client VM, Server VM and Minimal VM.
- Alpine Linux x86_64 and aarch64 are built with musl support.
- Windows x86_64, Windows ARMv8, Mac, Linux x86_64, and Linux ARMv7 distributions contain OpenJFX 11.
- Linux ARMv7 distribution contains Device IO API compiled for Raspberry Pi.

Refer to the Oracle JDK 11.0.22 release notes for further information on JDK 11 features. This document further outlines the peculiarities of Liberica distribution as compared to Oracle JDK 11 distribution.

3. Liberica JDK 11 distribution

Liberica JDK 11 is distributed as .rpm, .zip, .deb and .tar.gz packages. Please select the most appropriate for your purposes.

Liberica JDK 11 introduced all [new features](#) supported by OpenJDK 11.

With the introduction of the Jigsaw feature in JDK 9 and Minimal VM it is now possible to create a Runtime that is sufficient to run your application and trim down the size of the Runtime. To generate a Runtime with just the Minimal VM, add `--vm=minimal` to `jlink` options.

Liberica JDK continues to provide support for AOT and Graal JIT. Since in OpenJDK 11 builds these features are deemed experimental and deprecated, it is recommended to compile native executables with [Liberica Native Image Kit](#) to avoid errors.

By default, the Liberica uses Server VM. Server VM and Client VM can be enabled with `-server` and `-client` command line options, respectively. In case the deployment requires to minimize the footprint, it may be beneficial to use Minimal VM, which emphasises on a minimal footprint. It has C1 JIT compiler only, Serial GC and no serviceability features.

4. Security Baselines

BellSoft Liberica follows the security baselines for Oracle Java SE. Please refer to the Oracle documentation for a list of issues fixed in a given release.

5. Known Issues

This release does not contain any known issues.

6. 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-2024-20918	7.4	hotspot	compiler	network	high	none	none	unchanged	high	high	none
CVE-2024-20919	5.9	hotspot	runtime	network	high	none	none	unchanged	none	high	none
CVE-2024-20921	5.9	hotspot	compiler	network	high	none	none	unchanged	high	none	none
CVE-2024-20922	2.5	javafx	window-toolkit	local	high	none	required	unchanged	none	low	none
CVE-2024-20923	3.1	javafx	graphics	network	high	none	required	unchanged	low	none	none
CVE-2024-20925	3.1	javafx	media	network	high	none	required	unchanged	none	low	none
CVE-2024-20926	5.9	core-libs	javafx.script	network	high	none	none	unchanged	high	none	none
CVE-2024-20945	4.7	security-libs	javafx.xml.crypto	local	high	low	none	unchanged	high	none	none
CVE-2024-20952	7.4	security-libs	java.security	network	high	none	none	unchanged	high	high	none

7. Notable Issues

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

Issue ID: JDK-8315725

Summary: Increase `jdk.jar.maxSignatureFileSize` default size, which is too low for JARs such as WhiteSource/Mend unified agent jar

Description: `jdk.jar.maxSignatureFileSize` default size of 8MB was too low and caused errors. The fix increased the default value to 16MB.

Issue ID: JDK-8315835

Summary: Add Certigna Root CA - 2

Description: The Certigna root certificate has been added to the cacerts truststore.

Issue ID: JDK-8317296

Summary: Arrays should be cloned in several JAAS Callback classes

Description: In JAAS `ChoiceCallback` and `ConfirmationCallback`, arrays were not cloned when passed into a constructor or returned. This allowed an external program to get access to internal fields of these classes.

Issue ID: JDK-8318790

Summary: Add java.security.Provider.getService JFR Event

Description: Now an event is recorded each time a JCE cryptographic service for a specific algorithm is requested and/or used. This can help users determine what crypto algorithms their applications are using.

Issue ID: JDK-8319646

Summary: Add Telia Root CA v2

Description: Telia root certificate was added.

Issue ID: JDK-8320521

Summary: Add Let's Encrypt ISRG Root X2

Description: New Let's Encrypt root certificates were added.

Issue ID: JDK-8320876

Summary: Add four DigiCert root certificates

Description: Four new DigiCert root certificates were added.

8. Resolved Issues

JDK issues

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

Issue ID	Summary
JDK-6381945	(cal) Japanese calendar unit test system should avoid multiple static imports
JDK-6445283	ProgressMonitorInputStream not large file aware (>2GB)
JDK-8026393	jarsigner never shows a warning in badKeyUsage case
JDK-8041447	Test javax/swing/dnd/7171812/bug7171812.java fails with java.lang.RuntimeException: Test failed, scroll on drag doesn't work
JDK-8053479	(dc) DatagramChannel.read() throws exception instead of discarding data when buffer too small
JDK-8067250	[mlvm] vm/mlvm/mixed/stress/regression/b6969574 fails and perf regression
JDK-8153090	TAB key cannot change input focus after the radio button in the Color Selection dialog
JDK-8168408	Test java/awt/Focus/ActualFocusedWindowTest/ActualFocusedWindowBlockingTest.java fails intermittently on windows
JDK-8183374	Refactor java/lang/Runtime shell tests to java
JDK-8185531	[TESTBUG] Improve test configuration for shared strings

Issue ID	Summary
JDK-8195589	T6587786.java failed after JDK-8189997
JDK-8197825	[Test] Intermittent timeout with javax/swing JColorChooser Test
JDK-8205467	javax/management/remote/mandatory/connection/MultiThreadDeadLockTest.java possible deadlock
JDK-8207166	jdk/jshell/JdiHangingLaunchExecutionControlTest.java - launch timeout
JDK-8210168	JCK test .vm.classfmt.ins.code002.code00201m1.code__00201m1 hangs with -noverify
JDK-8210265	Crash in HSpaceCounters::update_used()
JDK-8211045	[Testbug] Fix for 8144279 didn't define a test case!
JDK-8212997	[TESTBUG] Remove defmeth tests for class file versions 50 and 51
JDK-8213898	CDS dumping of springboot asserts in G1ArchiveAllocator::alloc_new_region
JDK-8214694	cleanup rawtypes warnings in open jndi tests
JDK-8217329	JTREG: Clean up, remove unused imports in gc folder
JDK-8218178	vmTestbase/vm/mlvm/mixed/stress/regression/b6969574/INDIFY_Test.java fails with -Xcomp
JDK-8220083	Remove hard-coded 127.0.0.1 loopback address in JDK networking tests
JDK-8221396	Clean up serviceability/sa/TestUniverse.java
JDK-8223145	Replace wildcard address with loopback or local host in tests - part 1

Issue ID	Summary
JDK-8223788	[macos] JSpinner buttons in JColorChooser dialog may capture focus using TAB Key.
JDK-8224035	Replace wildcard address with loopback or local host in tests - part 9
JDK-8224204	Replace wildcard address with loopback or local host in tests - part 10
JDK-8226825	Replace wildcard address with loopback or local host in tests - part 19
JDK-8230435	Replace wildcard address with loopback or local host in tests - part 22
JDK-8230858	Replace wildcard address with loopback or local host in tests - part 23
JDK-8231556	Wrong font ligatures used when 2 versions of same font used
JDK-8231931	[TESTBUG] serviceability/sa/TestUniverse.java looks for wrong string with Shenandoah
JDK-8232135	Add diagnostic output to test java/util/ProcessBuilder/Basic.java
JDK-8232513	java/net/DatagramSocket/PortUnreachable.java still fails intermittently with BindException
JDK-8232933	Javac inferred type does not conform to equality constraint
JDK-8233000	Mark vmTestbase/vm/mlvm/meth/stress/compiler/deoptimize test as stress test
JDK-8233847	(sctp) Fix link-local IPv6 scope handling and test cleanup.
JDK-8237858	PlainSocketImpl.socketAccept() handles EINTR incorrectly
JDK-8238740	java/net/httpclient/whitebox/FlowTestDriver.java should not specify a TLS protocol

Issue ID	Summary
JDK-8240235	jdk.test.lib.util.JarUtils updates jar files incorrectly
JDK-8240604	Rewrite sun/management/jmxremote/bootstrap/CustomLauncherTest.java test to make binaries from source file
JDK-8240754	Instrument FlowTest.java to provide more debug traces.
JDK-8242330	Arrays should be cloned in several JAAS Callback classes
JDK-8244508	JFR: FlightRecorderOptions reset date format
JDK-8249812	java/net/DatagramSocket/PortUnreachable.java still fails intermittently with SocketTimeoutException
JDK-8251177	[macosx] The text "big" is truncated in JTabbedPane
JDK-8252713	jtreg time out of CtrlASCII.java seems to hang the Xserver.
JDK-8254711	Add java.security.Provider.getService JFR Event
JDK-8255548	Missing coverage for javax.xml.crypto.dom.DOMCryptoContext
JDK-8258914	javax/net/ssl/DTLS/RespondToRetransmit.java timed out
JDK-8259266	com/sun/jdi/JdbOptions.java failed with "RuntimeException: 'prop[boo] = >foo 2<' missing from stdout/stderr"
JDK-8260035	Deproblemlist few problemlisted test
JDK-8260431	com/sun/jdi/JdbOptions.java failed with "RuntimeException: 'prop[boo] = >foo<' missing from stdout/stderr"
JDK-8263530	sun.awt.X11.ListHelper.removeAll() should use clear()

Issue ID	Summary
JDK-8265586	[windows] last button is not shown in AWT Frame with BorderLayout and MenuBar set.
JDK-8265678	Test java/awt/Focus/ActualFocusedWindowTest/ActualFocusedWindowBlockingTest.java fails intermittently on windows
JDK-8266249	javax/swing/JPopupMenu/7156657/bug7156657.java fails on macOS
JDK-8267860	Off-by-one bug when searching arrays in AlpnGreaseTest
JDK-8268916	Tests for AffirmTrust roots
JDK-8271519	java/awt/event/SequencedEvent/MultipleContextsFunctionalTest.java failed with "Total [200] - Expected [400]"
JDK-8273804	Platform.isTieredSupported should handle the no-compiler case
JDK-8275329	ZGC: vmTestbase/gc/gctests/SoftReference/soft004/soft004.java fails with assert(_phases→length() ≤ 1000) failed: Too many recored phases?
JDK-8275333	Print count in "Too many recored phases?" assert
JDK-8278456	Define jtreg jdk_desktop test group time-based sub-tasks for use by headful testing.
JDK-8280004	DCmdArgument<jlong>::parse_value() should handle NULL input
JDK-8282143	Objects.requireNonNull should be ForceInline
JDK-8282404	DrawStringWithInfiniteXform.java failed with "RuntimeException: drawString with InfiniteXform transform takes long time"
JDK-8284331	Add sanity check for signal handler modification warning.

Issue ID	Summary
JDK-8285612	Remove jtreg tag manual=yesno for java/awt/print/PrinterJob/ImagePrinting/ClippedImages.java
JDK-8285687	Remove jtreg tag manual=yesno for java/awt/print/PrinterJob/PageRangesDlgTest.java
JDK-8286707	JFR: Don't commit JFR internal jdk.JavaMonitorWait events
JDK-8288325	[windows] Actual and Preferred Size of AWT Non-resizable frame are different
JDK-8288415	java/awt/PopupMenu/PopupMenuLocation.java is unstable in MacOS machines
JDK-8288993	Make AwtFramePackTest generic by removing @requires tag
JDK-8289077	Add manual tests to open
JDK-8289238	Refactoring changes to PassFailJFrame Test Framework
JDK-8289547	Update javax/swing/Popup/TaskbarPositionTest.java
JDK-8289584	(fs) Print size values in java/nio/file/FileStore/Basic.java when they differ by > 1GiB
JDK-8289745	JfrStructCopyFailed uses heap words instead of bytes for object sizes
JDK-8289917	Metadata for regionsRefilled of G1EvacuationStatistics event is wrong
JDK-8290067	Show stack dimensions in UL logging when attaching threads
JDK-8290469	Add new positioning options to PassFailJFrame test framework
JDK-8292407	Improve Weak CAS VarHandle/Unsafe tests resilience under spurious failures

Issue ID	Summary
JDK-8292683	Remove BadKeyUsageTest.java from Problem List
JDK-8292713	Unsafe.allocateInstance should be intrinsified without UseUnalignedAccesses
JDK-8293098	GHA: Harmonize GCC version handling for host and cross builds
JDK-8293107	GHA: Bump to Ubuntu 22.04
JDK-8293166	jdk/jfr/jvm/TestDumpOnCrash.java fails on Linux ppc64le and Linux aarch64
JDK-8293361	GHA: dump config.log in case of configure failure
JDK-8293466	libsig should ignore non-modifying sigaction calls
JDK-8293811	Provide a reason for PassFailJFrame.forceFail
JDK-8294281	Allow warnings to be disabled on a per-file basis
JDK-8294427	Check boxes and radio buttons have rendering issues on Windows in High DPI env
JDK-8294673	JFR: Add SecurityProviderService#threshold to TestActiveSettingEvent.java
JDK-8294941	GHA: Cut down cross-compilation sysroots
JDK-8294956	GHA: qemu-debootstrap is deprecated, use the regular one
JDK-8295213	Run GHA manually with user-specified make and configure arguments
JDK-8295885	GHA: Bump gcc versions
JDK-8296275	Write a test to verify setAccelerator method of JMenuitem

Issue ID	Summary
JDK-8297296	java/awt/Mouse/EnterExitEvents/DragWindowTest.java fails with "No MouseReleased event on label!"
JDK-8297640	Increase buffer size for buf (insert_features_names) in Abstract_VM_Version::insert_features_names
JDK-8298905	Test "java/awt/print/PrinterJob/ImagePrinting/PrintARGBImage.java" fails because the frames of instruction does not display
JDK-8299254	Support dealing with standard assert macro
JDK-8299255	Unexpected round errors in FreetypeFontScaler
JDK-8299330	Minor improvements in MSYS2 Workflow handling
JDK-8300259	Add test coverage for processing of pending block files in signed JARs
JDK-8300272	Improve readability of the test JarWithOneNonDisabledDigestAlg
JDK-8300405	Screen capture for test JFileChooserSetLocationTest.java, failure case
JDK-8301065	Handle control characters in java_lang_String::print
JDK-8301167	Update VerifySignedJar to actually exercise and test verification
JDK-8301570	Test runtime/jni/nativeStack/ needs to detach the native thread
JDK-8302017	Allocate BadPaddingException only if it will be thrown
JDK-8302525	Write a test to check various components send Events while mouse and key are used simultaneously
JDK-8303607	SunMSCAPI provider leaks memory and keys

Issue ID	Summary
JDK-8306134	Open source some AWT tests relating to Button and a few other classes
JDK-8306135	Clean up and open source some AWT tests
JDK-8306280	Open source several choice AWT tests
JDK-8306372	Open source AWT CardLayout and Checkbox tests
JDK-8306430	Open source some AWT tests related to TextComponent and Toolkit
JDK-8306575	Clean up and open source four Dialog related tests
JDK-8306765	Some client related jtreg problem list entries are malformed
JDK-8306883	Thread stacksize is reported with wrong units in os::create_thread logging
JDK-8307079	Update test java/awt/Choice/DragOffNoSelect.java
JDK-8307165	java/awt/dnd/NoFormatsDropTest/NoFormatsDropTest.java timed out
JDK-8308204	Enhanced certificate processing
JDK-8308592	Framework for CA interoperability testing
JDK-8308910	Allow executeAndLog to accept running process
JDK-8309095	Remove UTF-8 character from TaskbarPositionTest.java
JDK-8310265	(process) jspawnhelper should not use argv[0]
JDK-8310549	avoid potential leaks in KeystoreImpl.m related to JNU_CHECK_EXCEPTION early returns

Issue ID	Summary
JDK-8311285	report some fontconfig related environment variables in hs_err file
JDK-8311813	C1: Uninitialized PhiResolver::_loop field
JDK-8312065	Socket.connect does not timeout when profiling
JDK-8312126	NullPointerException in CertStore.getCRLs after 8297955
JDK-8312489	Increase jdk.jar.maxSignatureFileSize default which is too low for JARs such as WhiteSource/Mend unified agent jar
JDK-8312535	MidiSystem.getSoundbank() throws unexpected SecurityException
JDK-8312573	Failure during CompileOnly parsing leads to ShouldNotReachHere
JDK-8312972	Bump update version for OpenJDK: jdk-11.0.22
JDK-8313428	GHA: Bump GCC versions for July 2023 updates
JDK-8313576	GCC 7 reports compiler warning in bundled freetype 2.13.0
JDK-8313626	C2 crash due to unexpected exception control flow
JDK-8313657	com.sun.jndi.ldap.Connection.cleanup does not close connections on SocketTimeoutErrors
JDK-8313691	use close after failing os::fdopen in vmError and ciEnv
JDK-8313707	GHA: Bootstrap sysroots with --variant=minbase
JDK-8313792	Verify 4th party information in src/jdk.internal.le/share/legal/jline.md
JDK-8313815	The exception messages printed by jcmd ManagementAgent.start are corrupted on Japanese Windows

Issue ID	Summary
JDK-8314063	The socket is not closed in Connection::createSocket when the handshake failed for LDAP connection
JDK-8314094	java/lang/ProcessHandle/InfoTest.java fails on Windows when run as user with Administrator privileges
JDK-8314242	Update applications/scimark/Scimark.java to accept VM flags
JDK-8314262	GHA: Cut down cross-compilation sysroots deeper
JDK-8314263	Signed jars triggering Logger finder recursion and StackOverflowError
JDK-8314284	Enhance Nashorn performance
JDK-8314295	Enhance verification of verifier
JDK-8314307	Improve loop handling
JDK-8314468	Improve Compiler loops
JDK-8314730	GHA: Drop libfreetype6-dev transitional package in favor of libfreetype-dev
JDK-8315020	The macro definition for LoongArch64 zero build is not accurate.
JDK-8315062	[GHA] get-bootjdk action should return the absolute path
JDK-8315135	Memory leak in the native implementation of Pack200.Unpacker.unpack()
JDK-8315214	Do not run sun/tools/jhsdb tests concurrently
JDK-8315480	[11u] Harmonize GHA cross-compilation block with mainline
JDK-8315683	Parallelize java/util/concurrent/tck/JSR166TestCase.java

Issue ID	Summary
JDK-8315692	Parallelize gc/stress/TestStressRSetCoarsening.java test
JDK-8315696	SignedLoggerFinderTest.java test failed
JDK-8315766	Parallelize gc/stress/TestStressIHOPMultiThread.java test
JDK-8315770	serviceability/sa/TestJmapCoreMetaspace.java should run with -XX: -VerifyDependencies
JDK-8315862	[11u] Backport 8227337: javax/management/remote/mandatory/connection/ReconnectTest.java NoSuchObjectException no such object in table
JDK-8315863	[GHA] Update checkout action to use v4
JDK-8315937	Enable parallelism in vmTestbase/nsk/stress/numeric tests
JDK-8316087	Test SignedLoggerFinderTest.java is still failing
JDK-8316178	Better diagnostic header for CodeBlobs
JDK-8316206	Test StretchedFontTest.java fails for Baekmuk font
JDK-8316380	[11u] Backport 8170089: nsk/jdi/EventSet/resume/resume008: ERROR: suspendCounts don't match for : Common-Cleaner
JDK-8316514	Better diagnostic header for VtableStub
JDK-8316710	Exclude java/awt/font/Rotate/RotatedTextTest.java
JDK-8316746	Top of lock-stack does not match the unlocked object
JDK-8316906	Clarify TLABWasteTargetPercent flag

Issue ID	Summary
JDK-8316976	Improve signature handling
JDK-8317373	Add Telia Root CA v2
JDK-8317374	Add Let's Encrypt ISRG Root X2
JDK-8317547	Enhance TLS connection support
JDK-8317920	JDWP-agent sends broken exception event with onthrow option
JDK-8317967	Enhance test/jdk/javax/net/ssl/TLSCommon/SSLEngineTestCase.java to handle default cases
JDK-8318669	Target OS detection in 'test-prebuilt' makefile target is incorrect when running on MSYS2
JDK-8318705	[macos] ProblemList java/rmi/registry/multipleRegistries/MultipleRegistries.java
JDK-8318759	Add four DigiCert root certificates
JDK-8319187	Add three eMudhra emSign roots
JDK-8320597	RSA signature verification fails on signed data that does not encode params correctly

JFX issues

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

Issue ID	Summary
JDK-8309508	Possible memory leak in JPEG image loader
JDK-8313048	Better Glyph handling
JDK-8313056	General enhancements of Glass
JDK-8313105	Improved media framing



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