

Liberica Native Image Kit 23.1.3+1 (21.0.3+10) Release Notes



Liberica NIK
21.0.3
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1. Introduction

This document provides information about Liberica NIK release.

This particular version of Liberica NIK 23.1.3+1 is based on Liberica JDK 21.0.3+10.

**Note:**

For more information about Liberica JDK release, see [Liberica JDK Release Notes](#).

[Liberica Native Image Kit](#) is a utility Based on [GraalVM Open Source](#) that is capable of converting your JVM-based application into a fully compiled native executable ahead-of-time under the closed-world assumption with an almost instant startup time.

Liberica NIK supports the following platforms:

- Linux x86_64 (glibc)
- Linux Alpine x86_64 (musl)
- Linux AArch64 (glibc)
- Linux Alpine AArch64 (musl)
- Mac OS x86_64
- Mac OS AArch64
- Windows x86_64

Liberica NIK distribution

Liberica NIK is distributed as .apk, .deb, .dmg, .msi, .pkg, .rpm, .tar.gz, and .zip packages. Please [select the most appropriate](#) for your purposes.

2. What's New

This release contains the following updates and new features.

Notable Issues

This release does not contain any notable issues. For the list of Liberica JDK notable issues, see [Liberica JDK Release Notes](#)

Language and framework versions

Liberica NIK 23.1.3 supports the following languages and frameworks:

Component	Version
LLVM	16.0.1 (GraalVM CE Native 23.1.3)
Python	3.10.8 (GraalVM CE Native 23.1.3)
NodeJS	18.18.2
Java	Liberica JDK 21.0.3+10
Java Script	GraalVM JavaScript (GraalVM CE Native 23.1.3)
R	4.0.3 (FastR)
TruffleRuby	23.1.3 (Ruby 3.0.3)

Component	Version
Native Image	GraalVM version 23.1.3 (Liberica JDK 21.0.3+10, LTS)
Wasm	WebAssembly (GraalVM CE Native 23.1.3)

3. Known Issues

This release does not contain any known issues. For the list of Liberica JDK known issues, see [Liberica JDK Release Notes](#)

4. 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-2023-46809	6.8	node.js	crypto	network	high	low	none	unchanged	high	high	none
CVE-2023-5678	5.3	node.js	openssl	network	low	none	none	unchanged	none	none	low
CVE-2023-6129	6.5	node.js	openssl	network	high	none	none	unchanged	none	low	high
CVE-2024-0727	5.5	node.js	openssl	local	low	none	required	unchanged	none	none	high
CVE-2024-21011	3.7	hotspot	runtime	network	high	none	none	unchanged	none	none	low
CVE-2024-21012	3.7	core-libs	java.net	network	high	none	none	unchanged	none	low	none
CVE-2024-21068	3.7	hotspot	compiler	network	high	none	none	unchanged	none	low	none
CVE-2024-21094	3.7	hotspot	compiler	network	high	none	none	unchanged	none	low	none
CVE-2024-21892	7.5	node.js	credentials	local	high	low	none	changed	high	high	none
CVE-2024-22019	7.5	node.js	llhttp	network	low	none	none	unchanged	none	none	high
CVE-2024-22025	6.5	node.js	zlib	network	low	none	required	unchanged	none	none	high
CVE-2024-24758	3.9	node.js	undici	network	high	high	required	unchanged	low	low	low
CVE-2024-24806	7.3	node.js	libuv	network	low	none	none	unchanged	low	low	low

5. Resolved Issues

Liberica NIK issues

This is the list of Liberica NIK issues fixed in this release.

Issue ID	Summary
GR-49428	JVM standalones do not include any library config of the main component ().
GR-49431	Backport to 23.1: exclusion of library configs of the main component from JVM standalones.
GR-50673	Backport to 23.1: Make lambda class names format consistent with the JDK name format.
GR-50682	Quarkus fails even if class loader disabled.
GR-50802	Backport to 23.1: Minor fixes and cleanups.
GR-50823	Backport to 23.1: Fix stamp inversion for ZeroExtend and SignExtend operations.
GR-50823	Fix stamp inversion for ZeroExtend and SignExtend operations.
GR-50823	Incorporate the bounds of stampToInvert when calculating the bounds of the inverted stamp.
GR-50823	Infer input msb during stamp inversion for integer SignExtend.
GR-50823	Unittests for stamp inversion during conditional elimination.

Issue ID	Summary
GR-50878	Backport 23.1 : Use unsigned monitor and identity hash offsets and guarantee (not assert) that they are valid.
GR-50881	Backport to 23.1: Correctly handle printing certain JSON values in agent trace files.
GR-50916	Backport to 23.1: Calling getStackTrace on recently started platform thread can crash.
GR-50968	Backport to 23.1: Change lifecycle of JIT-compiled code.
GR-50971	Backport to 23.1 : Make segfault handler more robust.
GR-50979	Backport to 23.1: Quarkus fails even if class loader disabled.
GR-51028	Backport to 23.1: Constant fold reflection lookups in sun.nio.ch.Reflect.
GR-51070	Backport to 23.1: Create additional artifacts only on successful build.
GR-51075	Backport to 23.1: JFR cleanups
GR-51088	Backport to 23.1: Preprocess <code>_MSC_FULL_VER</code> to detect <code>cl.exe</code> version info.
GR-51092	Backport to 23.1: Fix debug section alignment which can lead to corrupt debug info
GR-51175	Backport to 23.1: Remove <code>Heap.allowPageSizeMismatch()</code> and provide a method to set the physical memory size.
GR-51218	Backport to 23.1: Introduce <code>ReportFatalErrorOnOutOfMemoryError</code> .
GR-51229	Backport to 23.1: Build GraalVM on Big Sur.

Issue ID	Summary
GR-51275	Backport 23.1 : Mark all killed XMM registers as @Temp in AMD64SHA256AVX2Op.
GR-51295	Update JVMCI to 23.1-b31.
GR-51311	Backport to 23.1: Crash log improvements.
GR-51319	Backport to 23.1: Improve intrinsicification of method handles.
GR-51331	Backport to 23.1 : Fix failure when no resource bundle nullary constructor is present
GR-51377	Backport to 23.1: Fix Cpuid1Ecx feature parsing for AMD CPUs.
GR-51386	Backport to 23.1: Consolidate application module name detection.
GR-51392	Backport to 23.1: Aarch: Add means for post-processing code after emitting from LIR.
GR-51425	Backport to 23.1: Only use -H:Path validation in non-bundle mode.
GR-51438	Backport to 23.1: Don't rethrow internal parser errors as SyntaxError.
GR-51478	Backport to 23.1: Execute LogManager shutdown hook after all other shutdown hooks.
GR-51483	Backport to 23.1: Fix a bug in the IsolateArgumentParser.
GR-51582	Backport to 23.1: IV: only non overflowing constant properties should be constant.
GR-51610	Update JVMCI to 23.1-b32.

Issue ID	Summary
GR-51612	Assertion error when internal resource cache is overridden by the <code>polyglot.engine.resourcePath</code> system property.
GR-51612	Backport to 23.1: Assertion error when internal resource cache is overridden by the <code>polyglot.engine.resourcePath</code> system property.
GR-51641	Always apply JVMTI-related substitutions.
GR-51689	Avoid deadlocks when the VM is out-of-memory and other threading-related fixes.
GR-51744	Backport to 23.1: Fix possible infinite recursion in <code>AbstractJSObjectArray.setElementImpl</code> .
GR-51752	Backport to 23.1: Invocation profiles are not needed for JIT compilation
GR-51763	Backport to 23.1: Incompatible NFI library change to the latest LTS release.
GR-51782	Backport to 23.1: Handle recently started threads without Thread object and NPE during VMOperation.
GR-51799	Cleanup CPU 23.1 : remove unsupported deploy jobs and gate jobs.
GR-51803	Backport to 23.1: Prevent macronodes in deoptimization targets.
GR-51828	Backport to 23.0: Add <code>CompilationIsolateOptions</code> .
GR-51829	Backport to 23.1: Properly catch exceptions during shutdown.
GR-51869	Backport to 23.1: Fixed read nodes must only be removed if they are not used as null checks.
GR-51883	Backport to 23.1: Fix annotation processor for Espresso interop nodes.

Issue ID	Summary
GR-51893	Backport to 23.1: Don't try to incorrectly move virtual state inputs out of loops
GR-51926	Backport to 23.1: Ensure CompilationResult.methods does not contain duplicates.
GR-51957	Backport to 23.1: Fix a deadlock in IsolateAwareTruffleCompiler.tearDownIsolateOnShutdown.
GR-52019	Backport to 23.1: Improve uncaught exception handler and error handling in CEntryPointSnippets.initializeIsolate().
GR-52063	Backport to 23.1: Workaround for a build-time crash.
GR-52104	Backport to 23.1: Don't optimize away Narrow in comparisons with mixed signedness
GR-52111	Update JVMCI to 23.1-b34.
GR-52114	Backport to 23.1: Do not inline ThrowableTracer#traceError.
GR-52139	Backport to 23.1: Introduce PolyglotInstrument#readyForContextEvents to fix context listener race
GR-52178	Backport to 23.1: Fix FrameStates for unresolved deopts with incorrect stack size.
GR-52225	Backport to 23.1: Loop fragment: ensure we are not killing control flow when we have nodes in head position not in counted position.
GR-52231	Update JVMCI to 23.1-b35
GR-52237	Backport to 23.1: Make options engine.CompilerThreads and engine.CompilationFailureAction available under UNTRUSTED sandbox policy.

Issue ID	Summary
GR-52302	NPE while diagnosing compilation failure when using compilation in isolate.
GR-52310	Backport to 23.1: switch aarch64registerconfig to check for darwin instead of not darwin.
GR-52311	Backport to 23.1: Fix failing JFR tests.
GR-52316	Make ContextPolicyTest#testOptionDescriptorContextReuse more robust.
GR-52324	Add InsertGuardFencesPhase into runtime compilation phases.
GR-52325	Backport to 23.1: Deopt loops in NetSuite JS code.
GR-52367	Update JVMCI to 23.1-b36
GR-52396	Backport to 23.1: Fix wasm.jar not being included in nodejs jvm standalone.
GR-52425	Add documentation for recent changes in NFATraversalRegexASTVisitor
GR-52425	Backport to 23.1: TRegex: fixes for bugs uncovered during fuzzing.
GR-52429	Fix references to checkEmptyMatch in comments
GR-52430	TRegex: fix various parser bugs
GR-52435	Backport to 23.1: Small fixes and improvements.
GR-52435	ExitOnOutOfMemoryError must wait until HeapDumpOnOutOfMemoryError finishes.
GR-52449	Backport to 23.1: Add InsertGuardFencesPhase into runtime compilation phases
GR-52465	Backport to 23.1: Upgrading the underlying Node.js to version 18.19.1.

Issue ID	Summary
GR-52503	Backport to 23.1: MoveGuardsUpwards: respect dom tree.
GR-52614	Improve a code installation error message.
GR-52617	Limit Log.exception() output.
GR-52617	Prevent register writes from floating.
GR-52645	Backport to 23.1: NPE while diagnosing compilation failure when using compilation in isolate.
GR-52670	Update labsjdk to 23.1-b37
GR-52697	Backport to 23.1: Avoid unnecessary NodeSourcePosition for runtime compilation.

6. Upgrading to the New Version

To keep your Liberica NIK 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 NIK Installation Guide](#).



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