Liberica Native Image Kit 23.0.4+1 (17.0.11+10)
Release Notes

be//soft

Contents

1. Introduction

This document provides information about Liberica NIK release.

This particular version of Liberica NIK 23.0.4+1 is based on Liberica JDK 17.0.11+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 23.0.4 supports the following languages and frameworks:

Component	Version
LLVM	15.0.6 (GraalVM CE Native 23.0.4)
Python	3.10.8 (GraalVM CE Native 23.0.4)
NodeJS	18.19.1
Java	Liberica JDK 17.0.11+10
Java Script	GraalVM JavaScript (GraalVM CE Native 23.0.4)
R	4.0.3 (FastR)
TruffleRuby	23.0.4 (Ruby 3.0.3)

Component	Version
Native Image	GraalVM version 23.0.4 (Liberica JDK 17.0.11+10, LTS)
Wasm	WebAssembly (GraalVM CE Native 23.0.4)

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-48705	Fix stamp inversion for ZeroExtend and SignExtend operations.
GR-48705	Incorporate the bounds of stampToInvert when calculating the bounds of the inverted stamp.
GR-48705	Infer input msb during stamp inversion for integer SignExtend.
GR-48705	Unittests for stamp inversion during conditional elimination.
GR-49573	Clean unsupported gate jobs
GR-50803	Backport to 23.0: Minor fixes and cleanups.
GR-50823	Backport to 23.0: 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-50824	Backport to 23.0.3 : Fix stamp inversion for ZeroExtend and SignExtend operations.
GR-50834	Fix intrinsic frame states
GR-50879	Backport 23.0 : Use unsigned monitor and identity hash offsets and guarantee they are valid.
GR-50880	Backport to 23.0: Correctly handle printing certain JSON values in agent trace files.
GR-50915	Backport to 23.0: Fix Thread.getStackTrace() right after Thread.start().
GR-50965	Backport to 23.0: Print crash log when exception handling fails.
GR-50972	Backport to 23.0: Make segfault handler more robust.
GR-51029	Backport to 23.0: Constant fold reflection lookups in sun.nio.ch.Reflect.
GR-51089	Backport to 23.0: Preprocess `_MSC_FULL_VER` to detect `cl.exe` version info.
GR-51092	Backport to 23.0: Fix debug section alignment which can lead to corrupt debug info
GR-51095	Speedup method verification.
GR-51110	Could not load library @rpath/libjsig.dylib for nodejs native standalone on GraalVM for JDK17.
GR-51176	Remove Heap.allowPageSizeMismatch() and provide a method to set the physical memory size.
GR-51230	Backport to 23.0: Build GraalVM on Big Sur

Issue ID	Summary
GR-51312	Backport to 23.0: Crash log improvements.
GR-51332	Update JVMCI to jvmci-23.0-b28
GR-51378	Backport to 23.0: Fix Cpuid1Ecx feature parsing for AMD CPUs.
GR-51426	Backport to 23.0: Only use -H:Path validation in non-bundle mode.
GR-51482	Update JVMCI to jvmci-23.0-b29
GR-51484	Backport to 23.0: Fix a bug in the IsolateArgumentParser.
GR-51583	Backport to 23.0: induction variables: only non overflowing constant properties should be considered constant properties
GR-51592	Backport to 23.0: Don't try to incorrectly move virtual state inputs out of loops
GR-51631	Update JVMCI to jvmci-23.0-b30
GR-51690	Backport to 23.0: Avoid deadlocks when the VM is out-of-memory and other threading-related fixes.
GR-51798	Backport to 23.0: Handle recently started threads without Thread object and NPE during VMOperation.
GR-51824	Backport to 23.0: Guard against deleting canonicalizer replacement.
GR-51830	Backport to 23.0: Cleanups and minor fixes.
GR-51834	Remove GU catalogs for CE
GR-51870	Backport to 23.0: Fixed read nodes must only be removed if they are not used as null checks.

Issue ID	Summary
GR-51927	Backport to 23.0: Ensure CompilationResult.methods does not contain duplicates.
GR-51958	Backport to: 20.3 Fix a deadlock in IsolateAwareTruffleCompiler.tearDownIsolateOnShutdown.
GR-51970	Backport to 23.0: Fix MacOS-specific perf data issue.
GR-52020	Backport to 23.0: Improve uncaught exception handler and error handling in CEntryPointSnippets.initializeIsolate().
GR-52064	Backport to 23.0: Workaround for a build-time crash.
GR-52106	Backport to 23.0: Don't optimize away Narrow in comparisons with mixed signedness
GR-52179	Backport to 23.0: Fix FrameStates for unresolved deopts with incorrect stack size.
GR-52226	Backport to 23.0: Loop fragment: ensure we are not killing control flow when we have nodes in head position not in counted position.
GR-52245	Update JVMCI to jvmci-23.0-b32
GR-52290	Backport to 23.0: Regex language connot be used with UNTRUSTED sandbox policy.
GR-52326	Backport to 23.0: Deopt loops in NetSuite JS code.
GR-52343	Fixes for new class initialization strategy.
GR-52399	Update JVMCI to jvmci-23.0-b33
GR-52464	Backport to 23.0: Upgrading the underlying Node.js to version 18.19.1.

Issue ID	Summary
GR-52615	Improve a code installation error message.
GR-52618	Add option ImplicitExceptionWithoutStacktraceIsFatal.
GR-52618	Backport to 23.0: Small fixes and improvements.
GR-52618	Improve uncaught exception handler and error handling in CEntryPointSnippets.initializeIsolate().
GR-52667	Update JVMCI to jvmci-23.0-b34
GR-52677	Backport to 23.0: Fix for birth time support-ing JDKs.

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.

Liberica Native Image Kit
23.0.4+1 (17.0.11+10)
Release Notes

be//soft