

AXIOM JDK

Инструментарий Нативных Образов Аxiom NIK Pro 24.2.0+1 Примечания к выпуску

Axiom NIK Pro | 24.2.0 | Март 2025 г.

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Содержание

1. Введение	4
Поставка Axiom NIK Pro 24.2.0+1	4
2. Что нового	5
Важные исправления	5
Версии языков и фреймворков	5
3. Известные проблемы	6
4. Безопасность	7
5. Исправленные дефекты	8
Исправления в Axiom NIK Pro	8
6. Обновление Axiom NIK Pro	92

1. Введение

В этом документе содержится последняя информация о выпуске Axiom NIK Pro. Данный выпуск Axiom NIK Pro основан на Axiom JDK Pro 24+37, номер версии Axiom NIK Pro 24.2.0+1 (24+37).



Примечание:

Примечания к выпуску Axiom JDK Pro см. на странице [Axiom JDK Pro](#), либо в разделе документации на [портале поддержки](#).

[Пакет разработчика Axiom NIK Pro](#) преобразует ваше Java-приложение в предварительно (AOT) скомпилированный исполняемый файл, который запускается автономно и почти моментально.

Axiom NIK Pro совместим со следующими платформами:

- 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

Поставка Axiom NIK Pro 24.2.0+1

Инструментарий Нативных Образов Axiom NIK Pro 24.2.0+1 распространяется в виде файлов `.apk`, `.deb`, `.dmg`, `.msi`, `.pkg`, `.rpm`, `.tar.gz` и `.zip`. Пожалуйста, выберите формат, который наиболее подходит для ваших целей.

2. Что нового

Важные исправления

В этой версии отсутствуют важные исправления.

Версии языков и фреймворков

Axiom NIK Pro 24.2.0 поддерживает следующие языки и фреймворки:

Компонент	Версия
LLVM	18.1.3 (GraalVM CE Native 24.2.0)
Python	3.11.7 (GraalVM CE Native 24.2.0)
NodeJS	22.13.1
Java	Axiom JDK Pro 24+37
Java Script	GraalVM JavaScript (GraalVM CE Native 24.2.0)
TruffleRuby	24.2.0 (Ruby 3.3.5)
Native Image	GraalVM версия 24.2.0 (Axiom JDK Pro 24+37)
Wasm	WebAssembly (GraalVM CE Native 24.2.0)



3. Известные проблемы

В этой версии отсутствуют известные проблемы.



4. Безопасность

В этой версии отсутствуют исправления уязвимостей.

5. Исправленные дефекты

Исправления в Axiom NIK Pro

Следующий список содержит дефекты, исправленные в Axiom NIK Pro версии 24.2.0. Чтобы посмотреть дефекты исправленные в Axiom JDK Pro, см. [Примечания к выпуску Axiom JDK Pro](#).

ID проблемы	Резюме
GR-14806	Update ruby/spec
GR-17457	IGV must be run on a LTS JDK so always do that for <code>jt igv</code>
GR-17457	Pass <code>--import-inner-classes</code> to <code>mx intellijinit</code>
GR-17457	Remove splitting and inline caching of <code>Regex#to_s</code> and <code>Regex#quote</code>
GR-17457	Revert "Use an identity profile to try to make the <code>RegexObject</code> PE constant in <code>MatchInRegionTRegexNode</code> "
GR-17457	Update copyrights
GR-17457	Update Eclipse SDK to 4.26
GR-17457	Update to actions/ <code>{upload,download}</code> -artifact@v4
GR-17457	Use the new <code>Env#getLanguageInfo()</code> to get a foreign object language's name
GR-17797	Improve docs around loop API.
GR-18163	Add <code>rb_gc_mark_locations</code> C function
GR-18163	Add <code>rb_syserr_fail_str</code> C function

ID проблемы	Резюме
GR-18163	Add <code>-Wl,-z,lazy</code> to <code>RbConfig::CONFIG['dldflags']</code>
GR-18163	Change order of module creation steps and assign a module's full name before calling the <code>Module#const_added</code> callback
GR-18163	Declare <code>File::SHARE_DELETE</code> constant
GR-18163	Do not consider deprecated functions as errors for core C extensions and prefer OpenSSL 3.0, then OpenSSL 3.x, then OpenSSL 1.1
GR-18163	Fix building native with OpenSSL 3
GR-18163	Fix <code>Kernel#eval</code> with non-Ruby shebang
GR-18163	Fix <code>Marshal.dump</code> when a Float value is dumped repeatedly
GR-18163	Fix <code>Module#include</code> for nested modules
GR-18163	Fix <code>rb_gc_mark_locations</code> and don't mark object twice
GR-18163	Fix some issues to support <code>rb_sys</code> gem
GR-18163	Follow-up to recently merged PRs
GR-18163	Implement <code>rb_category_warn</code> C function
GR-18163	Implement <code>rb_enc_interned_str</code> (#3706)
GR-18163	Implement <code>rb_hash_bulk_insert</code> (#3715)
GR-18163	Implement <code>rb_str_format</code> C function

ID проблемы	Резюме
GR-18163	Implement <code>rb_str_strlen()</code> (#3699)
GR-18163	Inherit <code>Polyglot::ForeignException</code> from <code>StandardError</code>
GR-18163	Prefer OpenSSL 3.0, then OpenSSL 3.x, then OpenSSL 1.1
GR-18163	Refactor constructing a <code>SystemCallError</code> 's message string
GR-18163	Reimplement <code>Float#round</code> in a way it is done in MRI
GR-18163	Repair serialising <code>Data</code> instances into Marshal format
GR-18163	Share a Fiber as soon as it's created and sharing is enabled
GR-18163	Untag passing <code>Float#round</code> spec
GR-18411	Replace a deprecated legacy Graal option <code>graal.</code> with <code>jdk.graal.</code> in <code>jt.rb</code>
GR-19220	Add version-related keys to <code>RbConfig::CONFIG</code>
GR-19220	Support <code>index/length</code> args for string passed to <code>String#bytesplice</code> (#3674)
GR-19220	Support <code>Time.new</code> with string timestamp argument and error when invalid (#3702)
GR-19220	Update MRI test exclusions
GR-19691	Add entry in Known CVEs document for ReDoS vulnerability in REXML
GR-19691	Add links to find the version of JOni and JCodings
GR-19691	Document the advantages of Oracle GraalVM in more details

ID проблемы	Резюме
GR-20446	Fix recently imported specs
GR-21590	Update Python imports.
GR-22782	Sulong launchers code modified to facilitate single-image launchers.
GR-23997	Periodic update of the graal import.
GR-24080	Bugfixes, refactorings, and cleanups for the Posix signal handling.
GR-24720	Refactor the GC options to use a single option.
GR-24847	Loop stamp improvements.
GR-24914	Make FMA a ternary arithmetic op
GR-24929	Add Alias for ConcurrentHashMap.NCPU and similar.
GR-26395	Periodic update of the graal import.
GR-26395	Periodic update of the trufferuby import.
GR-28037	Do not kill final field locations for volatile operations during read elimination.
GR-28239	Temporal fixes.
GR-30264	Call TruffleLanguage#{initializeThread,disposeThread} on that thread
GR-32682	Add initial version of the Bytecode DSL.
GR-32975	Increase test timeout for very slow machines.

ID проблемы	Резюме
GR-36056	Remove workaround around build assertions in a specific benchmark.
GR-39718	TruffleStrings: implement canonicalization of CalcStringAttributesNode.
GR-40265	Set proper class loader to a proxy class
GR-40323	Add MethodHandles.Lookup parameter to Shape.Builder.layout().
GR-40746	fix prioritization of OSR tasks in compilation queue of Truffle
GR-40931	Add experimental Truffle support for VirtualThread on HotSpot
GR-40931	VirtualThread support in Truffle on HotSpot
GR-41197	Remove SafepointSampler from the codebase.
GR-41197	Update conditional in PosixSubstrateSigprofHandler.
GR-41738	Clean up IdentityHashCodeNode lowering
GR-41919	Prepare for JUnit upgrade.
GR-41981	Use canonical resource path in resource registration
GR-42711	Expose foreign types on the polyglot module, make ForeignBoolean inherit from ForeignNumber and complete ForeignNumber
GR-42711	Fix array element types in the Ruby TCK
GR-42711	Give a composed class based on interop traits for foreign objects
GR-42711	Improve TCK error messages

ID проблемы	Резюме
GR-42711	Inherit from single-trait classes directly
GR-42711	Make foreign numbers inherit from ForeignNumberType, foreign strings from str and fix TCK
GR-42711	Rename GetHashingStorageNode to GetSetStorageNode and review usages
GR-42711	Use the source test python files, not the copy in test project output dir
GR-42743	Add runtime support for interpreter
GR-42796	Bump CI overlay.
GR-43361	Whole-Program Sparse Conditional Constant Propagation
GR-43505	Explicitly emit VEX or EVEX encoded instructions
GR-4353	Improve stamps for floating point arithmetic
GR-43631	Allow interop exceptions as exception state
GR-43927	Expose call tree roots from CallTreePrinter
GR-44710	Add workaround to activate the default stringio gem on require "stringio"
GR-45043	Update Prism to 1.0.0
GR-45043	Update Prism to v1.1.0
GR-45171	Basic JVMTI infrastructure.
GR-45200	Use a safe cast when retrieving the storage in array-based static objects.

ID проблемы	Резюме
GR-45238	Removing package-lock.json files of unused tools with obsolete dependencies.
GR-45299	Add documentation for using the SBOM GitHub integration for vulnerability/dependency tracking
GR-45416	CompilationAlarm shouldn't interfere with snippet creation
GR-45874	Add Native Image New Issue Template
GR-45910	Update developer instructions for substratevm.
GR-45919	Support generational ZGC.
GR-46292	Remove deprecated TruffleInstrument.Provider and TruffleLanguage.Provider.
GR-46386	Throw missing registration errors for JNI calls
GR-46615	Print output when ProcessBuilder#testRedirectToStream fails.
GR-46615	ProcessBuilderTest did not finish in time.
GR-47019	Make Image Heap code more extensible
GR-47672	Use generic types as targets in Espresso interop.
GR-47956	Add ExtraCallStackHeadRoom option for truffle compiled code on SVM.
GR-48338	Add options to include all classes from the class path
GR-48352	Add timer logging support to the ParseTask class

ID проблемы	Резюме
GR-48384	Layout distributions can include files from the suite.
GR-48384	Update GDB debugging support for Native Image with gdb-debughelpers.py.
GR-48439	Convert igvutil.args to common utility
GR-48910	Add Arrow Vector support
GR-48910	Introduce enable_java_integration method.
GR-49264	Make NativeImageHeap#readInlinedField public
GR-49291	Open CompilationTask for extension
GR-49347	Check if modules contain packages before attempting to open/export
GR-49349	Document why we need to updateShape() before markShared()
GR-49349	Remove unnecessary updateShape() calls
GR-49426	GuestGraal.
GR-49517	Add support for Windows x64 unwind info.
GR-49635	Update ClassLoaderValue maps to properly support modular service loading
GR-49661	Refactor DataBuilder::createMultiDataItem
GR-49845	Add system modules implicitly required by the application to the image builder module graph
GR-49857	Add option ZapNativeMemory.

ID проблемы	Резюме
GR-49863	Check JDK_LATEST_PROFILES if version specific ones can't be found.
GR-50090	Invalidate all code on compiler unit test.
GR-50334	Disable network IGV dumping in libgraal.
GR-50987	Use self.benchSuiteName instead self.name in mx_vm_benchmark.py
GR-51000	Always use a heap-base register.
GR-51083	Avoid reflection in ForkJoinTask.getThrowableException()
GR-51156	Extract resource name from url
GR-51270	Add the profile-inference-debug-ee jvm config.
GR-51303	Rework VectorSupport substitutions
GR-51409	Attempt to setup image heap using mremap
GR-51409	Image heap fallback to mremap
GR-51455	Create Gradle plugin with similar features as our Maven plugin.
GR-51479	Implement cgroup support in native code.
GR-51527	Only allow safe or unsafe abs explicitly in the code base.
GR-51588	Create jmp instruction whose operand is patched later
GR-51653	Expose method printing format and ability to collect transitive module readers

ID проблемы	Резюме
GR-51653	Expose method printing format from CallTreePrinter
GR-51653	Expose transitive module readers from NativeImageGeneratorRunner
GR-51805	Verify init memory semantics
GR-51913	Fix deoptimization into an exception handler.
GR-51925	LateLoweredNode for Graal.
GR-51974	Track never-null instance fields in the static analysis.
GR-52034	Convert IGV to maven build and update to netbeans 22
GR-52096	Set default locale at run-time.
GR-52150	Documentation of the C API memory management, inline comments, rename UpdateRefNode.
GR-52150	Python GC.
GR-52267	Update ReflectionUtil to enable lookupClasses with custom class loaders
GR-52317	Lift restriction on deoptimization in VirtualThreadJFRTTest.
GR-52445	AMD64MultiStackMove is now aware of intermediate killed stack slots.
GR-52473	Allow custom constructors for arrays and enums.
GR-52562	Add arithmetic optimizations around integer negation.
GR-52624	TruffleStrings: avoid OOM in TruffleStringBuilder.inflate.

ID проблемы	Резюме
GR-52651	Simplify BigInteger.implMultiplyToLen intrinsic.
GR-52676	Enable the Panama NFI backend by default
GR-52729	Compress ICU4J resources.
GR-52790	Print stack trace of UserException causes.
GR-52799	Support stepping in combination with suspend/resume in Truffle debuggers.
GR-52843	Add jsnative option to mx_graal_js to simplify building a native executable using an unchained GraalVM.
GR-52996	Improve VS detection and related error messages.
GR-53007	Emit linker relocations for MethodPointers
GR-53025	Format stable lambda names by parsing the bytecode directly.
GR-53040	Simplify PyTraceMalloc_Track, fix tox 4
GR-53428	Libgraal compilation error: java.lang.NullPointerException: Foreign object reference created in scope is no longer valid
GR-53439	Optimisation of # == methods
GR-53443	The last splitting fixes
GR-53451	Eagerly initialize libsvm_container
GR-53454	Fix @ReportPolymorphism warnings in Espresso

ID проблемы	Резюме
GR-53454	Warn when @ReportPolymorphism is used incorrectly
GR-53462	Document each slot in SlotKind
GR-53462	Fix mx warnings about transitive requires
GR-53462	Show the Java stacktrace for internal errors by default
GR-53462	Small fixes in BuiltinConstructors
GR-53477	Implement source phase imports proposal.
GR-53477	Integrate WebAssembly modules with ES modules.
GR-53482	Provide musl-dynamic test setup.
GR-53484	Provide musl-dynamic test configuration.
GR-53531	Implementation of Math.sumPrecise proposal.
GR-53576	Respect compressible flag for null in HostedConstantAccess
GR-53605	Outline the check for collecting embedded resources information
GR-53621	Extend Specify Class Initialization Explicitly guide with a demo part.
GR-53634	Handle static frame slots in BytecodeOSRMetadata#restoreParentFrame.
GR-53663	Implement Native Image Layers options.
GR-53669	Add layered stack walking support

ID проблемы	Резюме
GR-5369	Periodic update of the Graal import.
GR-53716	Add utility for replacing resource data after analysis.
GR-53754	Update Academic Publications page.
GR-53936	Adopt newer lock add idiom from HotSpot
GR-53938	Error when importing one function from JS under different type signatures.
GR-53938	Reimplement linking wasm module imports from JS.
GR-53994	Fold GraalVM CE and Oracle GraalVM install guides into one version; Add more installation options.
GR-53994	Update file path.
GR-53994	Update path to Getting Started guide
GR-54030	Weekly benchmarking CI load reduction.
GR-54031	Various JNI-related bugfixes.
GR-54068	Backport to 24.2: WebAssembly Relaxed SIMD Proposal.
GR-54085	Add regression test for asinh, acosh, and atanh.
GR-54085	Implement asinh, acosh, and atanh using MathUtils.
GR-54085	Reimplement asinh, acosh, and atanh using MathUtils.
GR-54112	Promote IgvHacks to IgvUtil

ID проблемы	Резюме
GR-54128	Re-import libsvm_container code and add change detection annotations
GR-54137	Persist and reload analysis graph in extension layers
GR-54142	Fix a problem with SEGFAULT in GameOfLife.
GR-54153	Add JDKLibDirectoryProvider image singleton
GR-54164	Create unnamed module counterparts in the runtime module graph
GR-54169	Make Stackifier not modify CFG Basic Block IDs.
GR-54193	Documentation for the exact reachability metadata.
GR-54203	Fail at image run time instead of image build time for complicated JSR-RET structures.
GR-54219	Avoid recursion in GraphOrder and SchedulePhase
GR-54231	Update GraalWasm embedding documentation.
GR-54245	Make NativeImageGeneratorRunner extensible
GR-54266	Reduce amount of benchmarking CI usage for JS.
GR-54300	Improve GC based disposal of polyglot engine and context.
GR-54304	Use valid placeholder return value during inlining
GR-54326	Espresso: continuations cooperation with instrumentation.
GR-54331	Nightly dev builds are based on JDK24.

ID проблемы	Резюме
GR-54333	New guide: Optimize a Native Executable for File Size.
GR-54354	Add Build Report reference documentation for the GraalVM web site
GR-54359	Add a new guide for Native Image SBOM support.
GR-54383	Start 24.2.0 dev cycle.
GR-54410	Update native-image/PGO.md toc_group.
GR-54457	Refactor resources docs
GR-54467	Jobs matching daily-bench-vm-.e-polybench-linux-amd64 timeout.
GR-54471	JFR CPU profiler should respect the sampling period.
GR-54472	Resolve merge conflits.
GR-54474	Use non-prefixed variants of fstat/lstat on Linux.
GR-54476	Deprecate legacy Graal option prefixes.
GR-54491	Add OWNERS file for espresso.
GR-54495	Fix off-by-one-bit error in MathUtils.asinh.
GR-54495	MathUtils.asinh result is off by one bit vs fdlibm.
GR-54502	Developer info is consistent with other suites.
GR-54502	Fix organization.

ID проблемы	Резюме
GR-54502	Update mx version.
GR-54505	Validate Wasm function arguments when called through Interop.
GR-54509	Enabling ECMAScript 2024 features by default.
GR-54515	Extend graal/docs owners list.
GR-54516	Support an arbitrary amount of threads in ThreadLocalHandshake
GR-54517	Get rid of FrameInstance#getFrame(READ_WRITE) in Sulong.
GR-54518	Polish Continuations API
GR-54523	Remove Unreachable Globs from Trie
GR-54524	Refactor the MXBean support.
GR-54543	Derived offset iv: properly implement isConstantStride for masked negate strides.
GR-54544	Specjbb2015 upgrade to 1.04 and removal of thread limitations.
GR-54550	Pool reachability handlers for reflection registrations
GR-54555	Replace sun.misc.Unsafe with jdk.internal.misc.Unsafe in the compiler.
GR-54568	Record activity in encodeFrameDatas().
GR-54569	Simplify HotSpotFastThreadLocal and HotSpotThreadLocalHandshake
GR-54570	Add an example of using the continuation API with serialization.

ID проблемы	Резюме
GR-54571	TemporalUtil cleanup.
GR-54574	Fix slnative command to support sl arguments starting with -.
GR-54580	Update labsjdk to 23+26-jvmci-b01
GR-54584	Reduce code size should be false by default.
GR-54591	Update labsjdk to 24+1-jvmci-b01
GR-54595	Move compiler bootstrap gates to dailies.
GR-54598	Fix handling of unstructured locking in the presence of deopts.
GR-54600	Fix StrengthenGraphs for LoadFieldNode when analysis is context sensitive.
GR-54610	Do not let undefined symbols be redefined.
GR-54617	Convert CE style jobs back to gates.
GR-54621	gate-vm-truffle-native-tck-js-jdk23-linux-amd64 fails on JDK 23+26.
GR-54623	Getting rid of some truffle-related deprecation warnings.
GR-54626	Update the embedders guide to include instructions on how to use polyglot isolates for specific platforms.
GR-54628	Migrate Temporal rounding and related operations to latest spec.
GR-54633	Update Musl Libc dependency setup.
GR-54633	Update Native Image static linking guide.

ID проблемы	Резюме
GR-54640	Skip transiently-failing assertGc() with virtual threads in ContextAPITest#testMultithreadedEnterLeave
GR-54642	Update CI overlay.
GR-54643	Ensure # of virtual threads < # of carrier threads in TruffleSafepointTest
GR-54647	Remove concept of frozen unsafe accessed fields.
GR-54648	Require that built-in libraries must have a JNI_OnLoad_libname function.
GR-54649	Merge master to galahad
GR-54653	Resolving error message-related failures in es-module test-suite.
GR-54656	Update SyncPort w.r.t. JDK-8329141: Obsolete RTM flags and code.
GR-54657	Prepare for JUnit upgrade
GR-54658	Prepare for JUnit upgrade.
GR-54661	Graph traversal fix in TypeFlowGraphBuilder
GR-54663	Order reachability-metadata.json fields
GR-54664	Only emit fallback configuration files if they contain data
GR-54671	Enhance truffle compilation logs.
GR-54674	Trace Polyglot Source Cache
GR-54678	Fixed deadlock in engine close while joining system threads.

ID проблемы	Резюме
GR-54683	Merge master to galahad.
GR-54684	Update mx version
GR-54685	Condition typeReached for Unsafe.allocateInstance.
GR-54686	Intrinsify Python _struct module.
GR-54687	Support converting foreign object to a non-mapped interface.
GR-54692	Accept malformed type descriptors coming from user files with a warning
GR-54695	Fix setPendingFlagForVirtualThread() and cleanup TruffleSafepointTest
GR-54696	Add a timeout for GitHub Actions jobs
GR-54696	Fix LoomTest#testManyVirtualThreads and re-enable it in CI
GR-54696	Re-enable LoomTest#testManyVirtualThreads in CI
GR-54696	Skip LoomTest#testManyVirtualThreads and add a timeout for GitHub Actions jobs
GR-54696	Skip LoomTest#testManyVirtualThreads as it is too slow and can hang
GR-54703	Add reflection metadata for jfrTracing field.
GR-54706	Fix WebAssembly caching.
GR-54706	Wasm modules compiled and instantiated via the JS API should be cached.
GR-54707	Refactor BuildConfiguration checks in ControlFlowGraph.

ID проблемы	Резюме
GR-54709	Introduce ApplicationLayerOnly and MultiLayer Image Singletons.
GR-54712	Add layered string interning support.
GR-54720	Fix RootNode.isCaptureFrameForTrace.
GR-54722	Fixes of performance regressions caused by resizable ArrayBuffers.
GR-54723	Optional chaining should work with foreign functions.
GR-54724	Make LocalizationSupport.registerBundleLookup thread safe.
GR-54725	Implement Promise.try proposal.
GR-54729	AbstractPolyglotTest#threadPool(N, vthreads) should create N threads and not more
GR-54732	TRegex: add new MATCH_BEGIN and MATCH_END position assertions for OracleDBFlavor.
GR-54733	Warn about deprecated config files in META-INF directories
GR-54734	Avoid using ClassCastExceptions as control flow in ToEspresso/ToReference nodes.
GR-54737	Add support for layered thread locals.
GR-54740	Loop exit: all with exception nodes that are used as value nodes need begin nodes for schedule.
GR-54741	Enforce strong hashes for mx downloads.

ID проблемы	Резюме
GR-54742	Support class file format errors in method parameter encodings.
GR-54744	Espresso: Improve polyglot stack traces.
GR-54745	Update labsjdk to 24+2-jvmci-b01
GR-54751	Added inspect.SuspensionTimeout option.
GR-54752	Do not set the unchecked stamp for interface arrays to a single implementor type.
GR-54752	Reduce MethodInlineBailoutLimit significantly.
GR-54753	Fix InterpreterCallStackHeadRoom changelog.
GR-54756	Implement JVM_ArrayCopy on Darwin
GR-54768	Merge master to galahad.
GR-54771	Build libffi with -fvisibility=hidden.
GR-54772	Install TruffleTestClass both in TestRunner#createTestClass and TruffleRunner.ParameterizedRunner constructor in order for it to work both with JUnit 4.12 and 4.13.2.
GR-54775	Fix issues found running gradle daemon.
GR-54781	Use --process-hidden in apply-predicates.
GR-54787	Fix documentation of unstructured locking in BytecodeParser.
GR-54790	Add maven downloader to (node)js jvm standalone.

ID проблемы	Резюме
GR-54790	Infer default maven artifact version and output dir.
GR-54791	Add note about GraalPy Gradle availability on Embedding Build Tools page.
GR-54791	Rendering and GraalPy version corrections in user getting started.
GR-54791	Synchronize master with docs/graal-vm/24.1.
GR-54799	Review and update Truffle READMEs and Language Tutorial doc.
GR-54802	Add required release updates to docs for GraalVM JDK 23 release.
GR-54802	Addressed the docs build post-gate failure.
GR-54802	Review Security documentation.
GR-54802	Update the Existing Support document in graal/docs.
GR-54824	TRegex: fix OracleDB base case fold table.
GR-54826	Update mx version
GR-54827	Ensure DeoptimizationSupport is enabled before accessing the singleton.
GR-54828	Use truffleattach to avoid the need for --add-exports=java.base/jdk.internal.misc=jdk.graal.compiler.
GR-54837	Remove warning around dynamic linking of musl.
GR-54841	Allow StrengthenGraphs to query FieldTypeFlow state for context sensitive analysis.

ID проблемы	Резюме
GR-54844	Enable -H:+IgnoreMaxHeapSizeWhileInVMOperation for polyglot isolate builds by default.
GR-54849	Support emitting code when closing the assembler.
GR-54850	Respect UseSecondarySupersCache and UseSecondarySupersTable
GR-54851	Check that function/block type index is in bounds.
GR-54851	Fix handling of trailing code after terminating <code>end</code> marker.
GR-54852	Fix JDWP unexpected errors relating to array commands.
GR-54859	Set the CI components of truffle gates correctly
GR-54861	Type converters should apply for specific exception ToEspresso nodes.
GR-54868	Fix bugs in the Espresso frame analysis.
GR-54871	Execute bootstrap methods for Proxy at image build time.
GR-54872	Replace ObjectFileTransformer with Feature callback
GR-54873	Make musl optional for RISC-V
GR-54877	Update labsjdk to 24+3-jvmci-b01
GR-54881	%TypedArray%.prototype.map should use Set (not CreateDataPropertyOrThrow).
GR-54885	Remove knowledge about deoptimization from static analysis.

ID проблемы	Резюме
GR-54886	Improvement to continuation debugging experience.
GR-54889	Additional machO assert when creating a relocation record
GR-54896	Fix digest warnings for downloads.
GR-54900	Delete snippet template return node duplicate if alive.
GR-54901	Make overflow checking a mandatory phase.
GR-54903	Decomission GraalVM Tools for Java VS Code extension.
GR-54904	Fix thread initialization in Panama NFI for pre-existing threads.
GR-54905	Allow Truffle NFI Panama to use Linker#{downcallHandle,upcallStub} without warnings
GR-54905	Export Panama APIs to Truffle NFI using an Accessor.
GR-54910	GuestGraal: Add support for truffle run-time compilation - method handles for upcalls
GR-54910	Lookup truffle method handles.
GR-54914	Add some validation to methods in VirtualFileSystem.Builder
GR-54915	Remove deprecated "proj" folder references from embedding VFS.
GR-54916	Decouple method ordering strategy from NativeImageCodeCache.
GR-54917	Do not include array indices among the fields of the fake class.

ID проблемы	Резюме
GR-54917	Including array elements among members.
GR-54918	Rename JDK23OrLater to JDKLatest and remove obsolete predicates
GR-54920	Upgrade JUnit to 4.13.2 by bumping mx version.
GR-54923	Improve partial evaluation in espresso.
GR-54930	Adding an option that enables/disables stack-trace-related extensions.
GR-54930	Do not enable non-standard error-stack-related extensions by default.
GR-54946	Refactor prior layer method logic.
GR-54957	Don't treat yellow-zone code as VM-internal code.
GR-54960	Use L1_line_size exported by JVMCI.
GR-54967	Avoid zero modulus when calling BigInteger.modPow.
GR-54974	Escape possible future wildcards in globs
GR-54975	Add substitution for ArraysSupport for handling foreign objects.
GR-54986	Canonicalize Pi with constant from Phi.
GR-54987	Share the NFI errno between all NFI backends
GR-54994	Remove duplicate thread sleep events and use a constant clock for JFR chunks.
GR-55000	GraalPy Maven plugin does not work in dev releases of Maven bundles.

ID проблемы	Резюме
GR-55003	Update labsjdk to 24+4-jvmci-b01
GR-55008	Fix outdated doc in ResolvedMethodHandleCallTargetNode.
GR-55009	TruffleStrings: guard all native pointer accesses with a reachability fence on its containing object.
GR-55011	Instrumented methods shouldn't be considered trivial.
GR-55021	Replace the use of the IndirectCallTargetNode with the SubstrateIndirectCallTargetNode in the substratevm
GR-55038	Refactor and fix implementation of DwarfLocSectionImpl#dwarfRegMap creation.
GR-55038	Revert "svm: disable debuginfotest temporarily due work around JDK-8329032"
GR-55038	svm: disable debuginfotest temporarily due work around JDK-8329032
GR-55047	Only mention image-layer in error message when option is enabled.
GR-55063	Remove the erroneous assertion in Method.acquireMethodAccessor.
GR-55064	Update LIBFFI to 3.4.6
GR-55072	Fix copyright headers.
GR-55073	Fix open-type world analysis.
GR-55075	Output from Java wrapper launchers diverted to stderr.

ID проблемы	Резюме
GR-55077	Ensure invocation plugin has the correct return type.
GR-55080	TRegex: exclude j.l.String constant folding test when compact strings are disabled.
GR-55081	Fix condition printing and agent conditions.
GR-55085	Add support for object replacers referring to prior layer constants.
GR-55086	Don't allocate FillerObjects at run-time.
GR-55087	Treat FillerArrays like primitive arrays.
GR-55088	Ignore transiently failing test.
GR-55088	TimeoutTest made stable.
GR-55094	Remove PolyglotNativeAPI.
GR-55097	Link update in native-image/Resources.md.
GR-55104	Ignore transiently-hanging test
GR-55104	Print the main thread stacktrace in case of exception for TruffleSafepointTest
GR-55113	TRegex: fix missing recursive back-reference guard on group escapes in OracleDBFlavor.
GR-55115	Truffle-side version check for jargraal.
GR-55132	Add job automatically creating a PR every Wednesday to update language imports

ID проблемы	Резюме
GR-55132	Periodic update of the language imports.
GR-55132	Update overlay
GR-55133	Fix compilation failure in canonicalization of CalcStringAttributesNode.
GR-55135	Update labsjdk to 24+5-jvmci-b01
GR-55158	Support "tree" references in @BasedOnJDKFile
GR-55159	Pass reachability-metadata.json files from driver.
GR-55172	Deprecate BuildOutputBreakdowns option
GR-55175	Adapt JDK-8315884: New Object to ObjectMonitor mapping
GR-55178	svm: disable native JFR unittests for now
GR-55178	svm: re-enable native JFR unittests in guard them with Container.isContainerized()
GR-55179	Follow-up fixes for continuations.
GR-55181	Removing the problematic parts of string_dedent test.
GR-55185	Review the usage of Native Image tooling names.
GR-55192	Add support for patching prior layer heaps.
GR-55195	New guide: Build a Native Executable from a Spring Boot 3 Application.
GR-55199	Add option QueryIfNotInCAPCache.

ID проблемы	Резюме
GR-55200	Upgrading the underlying Node.js to version 20.15.1.
GR-55202	Refactor GraalJS documentation.
GR-55211	Update graal JIT compiler docs
GR-55215	Enforce runtime module layer ordering
GR-55216	Support jni array region methods for foreign arrays.
GR-55231	Extend base image arguments for benchmarks in gate
GR-55236	svm: libcontainer: document functional change in CachedMetric
GR-55243	Prevent that large array allocations in VM-internal code trigger OutOfMemoryErrors.
GR-55244	Add regression test.
GR-55244	PromiseRejectionTracker should not be shared between contexts.
GR-55245	Only use OutOfMemoryUtil.reportOutOfMemoryError(...) when out of Java heap memory.
GR-55250	Remove top-level lowering methods for CommitAllocationNode et al
GR-55268	Report units in custom JFR NMT events.
GR-55269	Don't include GC related JFR serializers unless Serial GC is used.
GR-55278	Collect all external values for Layered Image

ID проблемы	Резюме
GR-55282	Cleanup logging code in Espresso
GR-55286	Make sandbox.MaxStackFrames mandatory - update documentation.
GR-55288	Add barista benchmark suite
GR-55291	Do not differentiate configuration type descriptors based on whether they come from a name or type field
GR-55291	Emit an empty reachability-metadata.json file for helloworld
GR-55293	Cleanup build artifacts.
GR-55296	Add byte[] and native constructors for embedder strings; Add Value.asStringBytes(StringEncoding).
GR-55296	Add comments for specs using strings in UTF-16 with not even bytes count
GR-55296	TruffleStrings: add support for non-native endian UTF-16 and UTF-32 without JCodings.
GR-55298	Extend the documentation of the call PrintAnalysisCallTreeType=CSV format.
GR-55300	Update labsjdk to 24+6-jvmci-b01
GR-55305	Add namespace to libcontainer.
GR-55308	Make polyglot API not swallow thread interrupts.
GR-55344	Allow TruffleContext#pause to be cancelled.
GR-55487	GuestGraal: Implement options as per GR-50104.

ID проблемы	Резюме
GR-55493	Ensure that there is a scope when parsing a formal parameter list.
GR-55498	Support JDK-8031818 in Graal
GR-55502	Add support for calling MultiLayeredImageSingleton.getAllLayers from traditional builds.
GR-55507	Improve reporting of AggregateErrors in the REPL.
GR-55523	Change ClassLoaderFeature to be layer-aware.
GR-55524	[JDK-8337337] Enable generational ZGC by default in tests
GR-55527	Disabling some unstable Test262 and TestV8 tests.
GR-55538	Garbage collection with multiple layers.
GR-55539	Review and synchronize GraalVM introduction documentation.
GR-55541	Use correct decode method to get path-string encoded in URL.
GR-55542	Improve serial GC heap verification and fix minor GC issues.
GR-55543	Add tags to Truffle gate jobs.
GR-55548	Improve method handle support in espresso.
GR-55550	Fix type signatures in WasiModule.
GR-55551	Espresso code cleanups
GR-55552	Layered Micronaut Hello World

ID проблемы	Резюме
GR-55553	Fix NPE in CalcStringAttributesNode.canonical when constant region is out of bounds.
GR-55554	[JDK-8334459] Emit membar when cloning primitive arrays
GR-55560	Make the truffle compilation log matching work both for logs with and without engine id.
GR-55575	Fix tabs include order in the Embedding guide.
GR-55575	Take out R code snippets from Embedding Languages guide.
GR-55580	Check lastIndex bounds in ES5's string.match(/re/g).
GR-55583	Update docs files owners list.
GR-55585	Update labsjdk to 24+7-jvmci-b01
GR-55586	Proguard fails when a dependency is a multi version jar with JDK-22 overlay.
GR-55593	Eagerly initialize caches in ValueConversions.
GR-55595	specify -Xmx8g for all benchmarktests
GR-55602	Memory mapping of image heap no longer works on Windows.
GR-55676	Register zip library as built-in only if used.
GR-55684	Remove narrow canon usage check.
GR-55686	GuestGraal: Add EE support.

ID проблемы	Резюме
GR-55689	Make native image independent of the host's loop data provider.
GR-55690	Misc fixes for espresso launchers.
GR-55691	Fixed a crash in <code>InheritedChannel.inetPeerAddress0()</code> .
GR-55694	Fix total frame size of JNI trampolines.
GR-55695	Document <code>pyenv-win</code> support.
GR-55695	<code>uv</code> now supports GraalPy for venvs and packages that don't need patches
GR-55696	<code>pyenv-win</code> now supports installing GraalPy
GR-55708	Add <code>premain</code> for static agent support.
GR-55708	Fix warnings in <code>substratevm</code> suite.
GR-55711	Use <code>notifyAfterInline</code> for marking inlining in <code>TrivialInline</code> .
GR-55715	Update SBOM documentation to include 'classpath' and 'export' options
GR-55731	Management: implement <code>JMM_GC_TIME_MS</code> and <code>JMM_GC_COUNT</code> .
GR-55732	Better error messages for <code>IncompatibleClassChangeError</code> .
GR-55841	Galahad CI: do not rename non-gate jobs
GR-55881	Add <code>java.lang.Double</code> to RMX serialization configuration.
GR-55884	Kill all finals on volatile.

ID проблемы	Резюме
GR-55955	Fixes for virtualenv
GR-55973	Ignore svm specific files in mx reimport-libcontainer-files
GR-55973	svm: mx reimport-libcontainer-files broken
GR-55991	Prepare CI for Composed LabsJDKs
GR-55992	Improve invokeDirect helper methods.
GR-55999	Remove duplicate throw_internal_error symbol.
GR-56006	PE read elimination: abort phi creation optimization for virtuals.
GR-56009	Use stable lambda names in native image debug info.
GR-56094	Remove constant memory buffer assumption and simplify ByteArrayWasmMemory.
GR-56095	Optimize getting ArrayBuffer byteLength.
GR-56104	Fix --bundle-create option and bundle-launcher feature on Windows.
GR-56106	Intrinsify Reference.clear (JDK-8329597)
GR-56108	Fix public gate substratevm on Windows.
GR-56109	Synchronize the use of class path and module path across website docs.
GR-56110	Improve error message for missing wasm module imports.
GR-56112	Add detection of System.getProperty("java.home") calls

ID проблемы	Резюме
GR-56166	Remove inline caching in NegotiateCompatibleEncodingNode and NegotiateCompatibleStringEncodingNode nodes
GR-56211	Categorize VectorSupport.ternaryOp as downstream implemented.
GR-56295	Fix: allow GraalVM versions with more than 3 components.
GR-56297	Update labsjdk to 24+8-jvmci-b01
GR-56337	Fix performance regressions due to inlining and JavaC.
GR-56339	Make spaces in NativeImageArgs not significant
GR-56343	Add a new guide: Optimize Memory Footprint of a Native Executable guide.
GR-56344	Make all annotation processors claim their annotations
GR-56349	Fix option ImplicitExceptionWithoutStacktracesFatal.
GR-56524	Correctly handle source array transitions in %TypedArray%.prototype.set.
GR-56526	Add gdb-debughelper tests to gate checks.
GR-56527	Do not use SimpleFormatter in Intl.ListFormat.prototype.formatToParts().
GR-56529	Array length may not fit into int in SetArrayLengthOrDeleteNode.
GR-56531	Avoiding a potential ArrayIndexOutOfBoundsException in addRangeGrow().
GR-56549	Stable profile fixes.
GR-56550	Fix sorting contiguous int and double arrays.

ID проблемы	Резюме
GR-56550	Fix sorting contiguous int and double arrays with holes at the end.
GR-56599	Create type units for types during debuginfo generation for referencing across multiple debug info files.
GR-56601	Initial support for jcmd.
GR-56675	Allow module name to be null instead of an empty string
GR-56676	TRegex: fix out-of-bounds read on broken UTF-16 strings.
GR-56677	Fix potential AIOOBE in RegExp flags getter.
GR-56681	Stop escaping '/' in JSON strings.
GR-56685	Update ci-overlays commit.
GR-56685	Update file path.
GR-56686	Disable Stack Trace API by default (outside V8 and Nashorn compatibility modes).
GR-56689	Do not use blockwise splice when the new length exceeds Integer.MAX_VALUE.
GR-56690	Do not use BigDecimal when comparing a huge BigInt and a Number.
GR-56700	Expose Java Tokenizer in _tokenize module
GR-56701	Migrate to nb_add/sq_concat CPython like slots.
GR-56702	mx now wants a version for every suite with maven artifacts

ID проблемы	Резюме
GR-56702	Update mx import.
GR-56776	Include slowPathHubOrUnsafeInstantiationError for filtering in unsafe allocation
GR-56800	Standalone tests should use mvn wrapper from internal url.
GR-56803	Update mx in common.json
GR-56805	Include wasm in js standalone.
GR-56809	Implement WASI functions required by the WASI test suites.
GR-56850	Add GraalPy repository to our patched pip
GR-56853	Export WebAssembly.Module byte source using buffer interop.
GR-56918	Update labsjdk to 24+9-jvmci-b01
GR-56921	Add an option to warn when C extensions are loaded
GR-57004	Move notifyAfterCompile call out of compileAll
GR-57058	Image heap writing found an object whose type was not marked as instantiated.
GR-57066	Avoid getHostBackend when instantiating UnimplementedGraalIntrinsics.
GR-57068	Export jdk.internal.misc to unnamed module in native image Java run.
GR-57069	Update SyncPort info.

ID проблемы	Резюме
GR-57090	Add mandatory approvers for substratevm.
GR-57101	Don't assert divisor != 1 when optimizing divs
GR-57103	Update component lists for benchmark env files.
GR-57104	Use r12 as zero value register where applicable.
GR-57115	Introduce -H:± SupportRuntimeClassLoading
GR-57118	Convert deopt to guard: handle cases when removeSplitPropagate canonicalizes an enclosing loop.
GR-57119	Espresso: Unify resolution paths into a LinkResolver class.
GR-57122	Remove unused add-exports.
GR-57129	Mark VectorSupport.rearrangeOp as implemented downstream
GR-57132	Optimize Node.clearInputs().
GR-57136	Update SyncPort info.
GR-57146	Remove PhysicalMemory#setSize()
GR-57161	IllegalStateException: Cannot call getObjectValue without Java frame anchor.
GR-57161	temporarily disable libgraal_truffle gates
GR-57163	Collection of fixes and improvements from the Bytecode DSL branch.

ID проблемы	Резюме
GR-57167	Make add/remove namespace an mx command
GR-57170	Polyglot.engine.TraceCompilation=true triggers uncaught exception during deoptimization.
GR-57170	Resolved review comments.
GR-57179	Do not add empty space at the end when an array element is inserted at the beginning.
GR-57180	Fix move generated for ternary op on AMD64
GR-57183	Do not fail the gate for unused parameters, it is not worth it
GR-57187	Update labsjdk to 24+10-jvmci-b01
GR-57192	Basic suport for MLX library
GR-57192	More fixes for nanobind
GR-57193	Remove macro options from help output
GR-57194	Fix new WebAssembly spec tests.
GR-57195	Simplify LoopNode.reportLoopCount.
GR-57202	Bump CI overlays
GR-57209	Changelog entry about updated -XX:JVMCINativeLibraryThreadFraction default value.
GR-57210	Fix failed PE-constness assert in python slot dispatchers

ID проблемы	Резюме
GR-57219	Add custom class registry for foreign objects
GR-57222	Update test262.
GR-57230	Add 'assert owns GIL' to all Java refcount operations.
GR-57235	Persist types and methods flags across layers
GR-57240	Loop Infrastructure: check for overflow in byte and short range for various loop opts.
GR-57243	Adapt 8337958: Out-of-bounds array access in secondary_super_cache.
GR-57244	Counted loop detection: always check iv direction exists.
GR-57248	Change open type world dispatch table slot calculation and add validation code for layered builds.
GR-57248	Delay resolution of vtable slots until final layer.
GR-57248	Make HostedMethod naming layer-aware
GR-57248	Redo layered symbolname passing.
GR-57249	Follow up for "Inline RubyStringLibrary" PR
GR-57249	Inline RubyStringLibrary
GR-57251	Add GitHub action for weekly native-image layer testing
GR-57258	Adapt reflection for multiple layers

ID проблемы	Резюме
GR-57260	Implement vector shift operations
GR-57260	Refactor ShiftNode
GR-57264	Add CI component "style"
GR-57270	Refactor the IsolateArgumentParser
GR-57270	Use the refactored isolate arguments and cleanup.
GR-57271	Adapt JDK-8337987: Relocate jfr and throw_exception stubs from StubGenerator to SharedRuntime
GR-57273	Add common CI files to gate predicates for sulong and espresso.
GR-57276	Reset Provider.Service.constructorCache field.
GR-57279	Make sure namedGroups from TRegex are used.
GR-57282	Remove experimental label from GraalPy docs.
GR-57282	Remove experimental label from GraalWasm doc.
GR-57289	Enable Java assertions in an MSpec launcher process
GR-57289	Fix type checks need to always be performed to avoid heap corruption.
GR-57292	TruffleStackTrace.fillIn doesn't work during context pre-init.
GR-57299	Update labsjdk to 24+11-jvmci-b01
GR-57299	Update labsjdk to 24+12-jvmci-b01

ID проблемы	Резюме
GR-57300	Crema .class file parser refactor.
GR-57302	ES module loading does not work correctly with Sources created from URL.
GR-57306	Avoid NullPointerException when provider name is null.
GR-57307	x86: Improve the code generation for floating point comparison
GR-57307	X86: Improve the code generation for floating point comparison
GR-57310	Add Native Memory Tracking for the image heap and the Java heap.
GR-57317	Update and clean up patches, part #1
GR-57317	Update and clean up patches, part #2
GR-57322	Add a getter for the host LanguageInfo into TruffleLanguage.Env.
GR-57332	Merge master to galahad.
GR-57334	Update JavaMonitor to jdk-24+11.
GR-57335	Add getters to KnownOffsets and helper to determine itable start offsets in OpenTypeWorld
GR-57360	Refactor and document layer loader.
GR-57362	Update SyncPort info.
GR-57382	Add mock owner file with a mandatory approver for testing
GR-57384	Preserve origin why resources are included in an image.

ID проблемы	Резюме
GR-57385	Improve performance of interop invoke member.
GR-57386	Backport to 24.2: Increase Wasm memory limits.
GR-57386	Increase Wasm memory limits.
GR-57390	Enable constant folding on getAllLayers calls.
GR-57392	Add Build Report guide for the GraalVM web site
GR-57393	Prepare Native Image codebase for WP SCCP
GR-57407	In-depth docs - maven and gradle plugins.
GR-57412	Adapt JDK-8338745: Intrinsicify Continuation.pin() and Continuation.unpin()
GR-57413	Cleanup of exposed embedding APIs.
GR-57414	Truffle DSL processor: fix for incremental compilation in IDEA.
GR-57502	Update upstream Python version in docs for 24.1 release.
GR-57505	Remove usage of Pair in locatable options.
GR-57506	Fix handling non-BMP characters in literals with escapes
GR-57507	Pass some options directly and only to isolate creation.
GR-57519	IncrementalCanonicalizerPhase: java.lang.AssertionError: Empty stamp
GR-57537	Avoid recursive lock method for jdwp suspension and pin objects while in suspended state.

ID проблемы	Резюме
GR-57539	Parse Stable and DontInline vm annotations, only apply vm annotations for privileged classes.
GR-57544	Prefer getLimitCheckedIV.
GR-57548	During exit, don't log extra messages when using system exit.
GR-57550	Support long targets in bytecode OSR API
GR-57552	Allow registerOpaqueMethodReturn/ReturnsAllInstantiatedTypes for methods returning primitives
GR-57553	Delay the canonicalization of TestDeoptimizeNode
GR-57557	x86 - Use BMI2 shift instructions
GR-57557	X86 - Use BMI2 shift instructions
GR-57588	Enable tests for the JS regexp-modifiers proposal.
GR-57588	Implement the JS regexp-modifiers proposal in TRegex.
GR-57589	Implement RegExp.escape.
GR-57590	Implementation of Handling Time Zone Canonicalization Changes proposal.
GR-57591	Implement Uint8Array to/from base64 and hex proposal.
GR-57595	Fix Addr part alignment in Truffle compilation logs.
GR-57603	Import Ruby 3.3.5

ID проблемы	Резюме
GR-57608	Backport: Handle Enable-Native-Access manifest attribute if present
GR-57608	Support --enable-native-access hosted option in native image
GR-57608	svm: adopt "JDK-8331671: Implement JEP 472: Prepare to Restrict the Use of JNI"
GR-57609	Upgrading the underlying Node.js to version 22.11.0.
GR-57616	TextEncoder/TextDecoder Web API.
GR-57618	Use mx checkout-downstream to get enterprise in graalpython
GR-57623	Fix scipy build
GR-57624	Fix Locale NPE in JDK 24+10 and better.
GR-57627	Allow LibGraalFeature class to be loaded by HostedLibGraalClassLoader.
GR-57630	Document GraalWasm and polish README.
GR-57631	Bump mx version
GR-57635	Implement sq_repeat and nb_multiply CPython like slots.
GR-57636	Replace LibGraalFeature with GuestGraalFeature.
GR-57637	Build Layered Image with external libraries
GR-57641	Implement Vector API lane operations
GR-57646	Make LayerUse option path-based and classify as BundleMember input.

ID проблемы	Резюме
GR-57649	Use replaceObjectWithConstant in reflection plugin.
GR-57653	Run PolyglotExceptionTest#testHostOOMResourceLimit in a subprocess.
GR-57654	Fix racy assertion for weak keys in shape transition map.
GR-57654	Fix racy assertion for weak keys in TrieTransitionMap.
GR-57658	Add language info lookup to TruffleLanguage.Env
GR-57659	Do not include TruffleJfrFeature if PGO config is specified.
GR-57660	Port Math.tanh intrinsic.
GR-57679	Use Espresso project name instead of Java on Truffle.
GR-57681	Automatically convert byte buffers to host byte arrays.
GR-57735	Deprecate exposed truffle filesystem spi in VirtualFileSystem.
GR-57736	Report loop count in typed array constructor.
GR-57737	Improve Espresso jdwp connection logic.
GR-57740	Update labsjdk to 24+13-jvmci-b01
GR-57742	Adapt JDK-8339112 Move JVM Klass flags out of AccessFlags
GR-57748	Migrate remaining binary nb slots
GR-57764	New item assignment slots

ID проблемы	Резюме
GR-57800	Compare JVMCI objects with equals instead of == .
GR-57802	Prioritize Python methods over foreign members
GR-57805	Fix layered images HelloWorld CE.
GR-57814	Prevent emission of typeReachable in reachability-metadata.json
GR-57815	GraalJSScriptEngine: NPE when setting empty engine bindings (#840)
GR-57817	Clean up of existing module support classes.
GR-57817	Eagerly initializing safepoint mechanism classes.
GR-57817	Fixed bash launchers.
GR-57817	Fixed gates.
GR-57817	Fixed review comments.
GR-57817	Fix JDK restricted access warnings
GR-57817	Fix JDK restricted access warnings and other warnings
GR-57817	Moved virtual thread support.
GR-57817	Possibility to disable enable-native-access delegation.
GR-57817	Prepare JNI and Unsafe usage for JDK 24.
GR-57817	Removed unneeded ForeignSupport.

ID проблемы	Резюме
GR-57817	Removed workarounds from labsjdk-24+13-jvmci-b01 update.
GR-57817	Resolved review comments.
GR-57817 sulong	set --enable-native-access for unittest [JDK-8331671:]
GR-57817	truffle: set --illegal-native-access=allow in the launcher and unittest config [JDK-8331671]
GR-57817	Unconditional delegation of enable-native-access policy.
GR-57817	vm: set --enable-native-access for agentscript graalvm-tests [JDK-8331671]
GR-57823	Add otw config.
GR-57835	Remove dead threads from PolyglotContextImpl#threads during new thread initialization.
GR-57842	Update bouncycastle dependency
GR-57844	Shared engine cannot be used with GraalPyResources.
GR-57845	Fix symbolic references to StaticObject in ClassAssembler
GR-57851	Allow non-Int Contiguous*Array to ZeroBased*Array conversions in WriteElementNode.
GR-57861	Support offsetphis correctly in loop peeling.
GR-57900	Run wasm coverage job on JDK 21.

ID проблемы	Резюме
GR-57944	GraalPy embedding: better experience when not embedding Python home.
GR-57945	Make js.webassembly option stable.
GR-57948	Update SyncPort info.
GR-57953	Set --enable-native-access=org.graalvm.truffle[.runtime] in node launcher.
GR-57955	Ensure the persistType and persistMethod methods are thread safe
GR-57965	Improve robustness of the VMEventListeners connection handling by avoiding NPE on shutdown.
GR-57966	Make js.load option stable and allowed in sandboxed mode.
GR-57969	Update PosixPerfMemoryProvider to JDK 24+13 and annotate with @BasedOnJDKFile.
GR-57978	Remove unused classes and methods in SVM (and some in compiler).
GR-57984	Backport to 24.2.0: Deprecate the GraalWasm AsyncParsing options.
GR-57988	Update labsjdk to 24+14-jvmci-b01
GR-57989	Add patch for pendulum-3.0.0.
GR-57991	VirtualFileSystem should not try to extract real FS paths.
GR-57993	Avoid the use of HotSpot JVMCI types to detect host vm objects.
GR-57995	Inline the Preconditions.checkIndex check when using exception edges

ID проблемы	Резюме
GR-57996	Support host VM that don't have have FlightRecorder VM option.
GR-57997	Rename GuestGraal to LibGraal.
GR-57998	Remove ComputedValueField and ReadableJavaField.
GR-57999	Replace JVMCI API with Native Image API.
GR-58000	Native Image support for GetStringUTFLengthAsLong in JNI_VERSION_24 (JDK-8328877)
GR-58001	Enable native access for the image builder module path only
GR-58002	Adding an experimental executor that runs tasks in event loop thread.
GR-58038	Phase plan fuzzing fixes
GR-58041	Use mx 7.30.0.
GR-58042	Add subtyping to @AutomaticallyRegisteredImageSingleton-generated Features
GR-58050	Add MetaAccessExtensionProvider.getStaticFieldForAccess.
GR-58055	Ensure unique fallback methods.
GR-58055	Track fallback methods created within fallbackResolveConcreteMethod.
GR-58056	More detailed assertions when FrequencyEncoder doesn't contain an object.
GR-58056	Use deep hashcode for ArithmeticOpTable.floatConvert.

ID проблемы	Резюме
GR-58060	Add compilationFailureAction to ctw coverage jobs.
GR-58060	Limit the number of threads used for CTW
GR-58062	Update GraalJS Getting Started example to run on module path.
GR-58063	Bisect-benchmark job fails because of removed imported-constants.json.
GR-58070	Update VisualVM documentation and add more validation for the option '--enable-monitoring'.
GR-58076	Cache most of the CallTargets even in single context mode.
GR-58077	Avoid r12 as null during LIR optimizations.
GR-58083	x86 - Add vmovddup
GR-58083	X86 - Add vmovddup
GR-58088	Improve layer build times and memory usage.
GR-58089	Finalize and dispose embedder thread when it is removed from PolyglotContextImpl#threads map due to Thread#isAlive returning false.
GR-58090	Allow to pass a shared WebAssembly.Memory to a Worker.
GR-58092	Implement _PyLong_FromByteArray
GR-58093	Add Truffle gate using oraclejdk.
GR-58094	Add missing profiles in SuperBuiltins\$Get.

ID проблемы	Резюме
GR-58103	JBang integration templates do not work.
GR-58104	Implement Vector API mask operations
GR-58106	Start type IDs at 1.
GR-58116	Add native-image Barista benchmark suite
GR-58118	Adapt saturation to open world.
GR-58119	Add first CI barista bench jobs (JVM only)
GR-58124	Fix leaking nulls to python in OSError.args
GR-58129	LayerUse should only disable ClosedTypeWorldHubLayout, not ClosedTypeWorld.
GR-58130	Update labsjdk to 24+15-jvmci-b01
GR-58131	Generated launcher in embedding apps points to absolute path where originally created.
GR-58180	Correction of the broadcasting of SharedArrayBuffer in Test262.
GR-58201	Document performance investigation (and some other docs updates)
GR-58207	X86 - Refactor VEXOpAssertion
GR-58214	Respect order of arguments for explicit main class and image name.
GR-58215	Adapt JDK-8329254: optimize integral reverse operations on x86 GFNI target.

ID проблемы	Резюме
GR-58217	Fix file name for Target_jdk_internal_util_Preconditions
GR-58219	Fix some typos in the documentation on Truffle splitting.
GR-58220	Use callTarget.id instead of hashCode in OptimizedTruffleRuntime and TraceSplittingListener.
GR-58221	Improve nest support.
GR-58223	Native image properties resource should use maven coordinate location.
GR-58225	JVMCI native library compiler has disabled Java calls by default.
GR-58229	Add patch for torch 2.4.1
GR-58231	Make classes in LibGraalSubstitutions static.
GR-58233	Adding detailed contributing information and census.
GR-58235	Several CI benchmarking fixes and improvements.
GR-58237	Improve the error message when NativeImageFileSystemProvider is not present.
GR-58238	Adding some missing interop boundary calls.
GR-58239	Enforce that substitution target classes are static when they are inner classes.
GR-58270	Support dynamically generated vm configs.
GR-58272	Transient NPE in jbang tests on windows.

ID проблемы	Резюме
GR-58273	Avoid issues on host VMs without continuation support.
GR-58275	Public gate debuginfotest broken.
GR-58278	Add documentation for the interop registry
GR-58280	Avoid a native-access-related warning from 'mx js' on JDK 24.
GR-58285	EntriesIterator should handle the potential removal of the current entry.
GR-58286	Fix const binding increment, decrement, and compound assignment.
GR-58286	JSConstantNumericUnitNode should never be executed.
GR-58289	Update labsjdk to 24+16-jvmci-b01
GR-58292	Add option to disable substitutions.
GR-58293	Don't allow guest language code execution on other thread during language context initialization.
GR-58304	Ensure java 17+ in jbang examples
GR-58305	Continuation capture always uses full liveness analysis.
GR-58381	Synchronize accesses to class init state
GR-58383	Make missing registration warn mode stack trace length customizable
GR-58384	Add patch for newer pybind11
GR-58385	Update SyncPort info.

ID проблемы	Резюме
GR-58419	Make UnsafeGetStableArrayElement respect -XX: -UseCompressedClassPointers.
GR-58446	Ensure options used by the native image driver work on espresso.
GR-58447	TruffleString: disable unit test transiently failing when not enough heap space is available.
GR-58448	Fix substitutions with non-static specialization with inlined caches.
GR-58460	Espresso: support constructors created by ReflectionFactory.
GR-58466	Fix source launcher regression.
GR-58468	Load lambda types in the application layer
GR-58469	Cut ties with Sulong managed.
GR-58473	Async GC with RSS guidance
GR-58476	Fetch-globals.js: fix test function name (#846).
GR-58478	Link base layer libraries as a dynamic library
GR-58479	LSPLibrary corrections and tests.
GR-58480	Allow control of throwDeniedThreadAccess via TruffleContext.threadAccessDeniedHandler.
GR-58483	Update bcutil dependency
GR-58485	ensure libgraal has symbols

ID проблемы	Резюме
GR-58488	Cleanups and fixes for the premain support.
GR-58492	Layered NI use open world analysis results as virtual invoke profiles.
GR-58500	Incorrect address location for compressed hub references in DWARF debuginfo.
GR-58510	Better error message in CompilationAlarmPhaseTimeTest.
GR-58510	Compilation alarm test: allow delta for time difference.
GR-58518	Register base layer virtual calls as roots.
GR-58522	VectorAPI implements fp division
GR-58523	Improve and refactor test_standalone - enable aarch64
GR-58523	Improve and refactor test_standalone - gradle timeouts.
GR-58523	Improve and refactor test_standalone - native build timeouts.
GR-58523	Improve and refactor test_standalone - split gates.
GR-58526	add missing PyRange_Check
GR-58528	Update labsjdk to 24+17-jvmci-b01
GR-58531	Eagerly initialize caches in method handle implementation.
GR-58535	Adopt "JDK-8314794: Improve UTF8 String supports"
GR-58535	svm: Adopt "JDK-8314794: Improve UTF8 String supports"

ID проблемы	Резюме
GR-58540	Use primary suite if no config is passed to <code>_run_graalvm_cmd</code>
GR-58542	Process <code>--version</code> , <code>--help</code> <code>--help-extra</code> like java does.
GR-58543	Add NI prerequisites to macOS and Linux install guides.
GR-58546	Allow coverage collection for espresso.
GR-58547	Provide minimal NativeLibraries implementation.
GR-58553	svm: work around "JDK-8340831: Simplify simple validation for class definition in MethodHandles.Lookup"
GR-58564	Remove <code>Node.NodeIntrinsic.injectedStampsNonNull</code> method.
GR-58567	Implementation of Worker API.
GR-58570	Fix Missing quotation marks around <code>parameterTypes</code> in Reachability Metadata documentation.
GR-58571	Preserve local symbols if post-link stripping follows.
GR-58575	SubstrateVM PLT/GOT Feature
GR-58578	CompilationAlarm error message improvements.
GR-58580	<code>GraalPyResources.contextBuilder(Path resourcesDirectory)</code> does not handle Windows.
GR-58584	Don't use <code>context/language</code> references with this of inlined nodes.
GR-58596	Fix duplicate class definition attempts for generated type-mapped proxies.

ID проблемы	Резюме
GR-58597	Cache and share Wasm-to-JS function adapters.
GR-58601	Update SBOM user-facing documentation
GR-58601	Update user-facing documentation for SBOM feature
GR-58622	Compact binary encoding for ObjectCopier.
GR-58627	Add documentation for native memory tracking (NMT) #9788.
GR-58634	Fix error message when prepareOSR long overload is not implemented
GR-58649	Add assertion message
[GR-58650] Port JDK-8341013	Optimize x86/aarch64 MD5 intrinsics by reducing data dependency.
GR-58651	Enforce correct values for Services.IS_[INIBUILDING]_NATIVE_IMAGE in image-runtime.
GR-58655	Don't use tmpfs and forced machine type for ondemand-vm-build.
GR-58665	Update labsjdk to 24+18-jvmci-b01
GR-58667	Mark VectorSupport.wrapShuffleIndexes as intrinsified downstream
GR-58670	Clear polyglot source cache more aggressively.
GR-58672	Test libgraal also on darwin and windows
GR-58687	Add regression test for Polyglot.eval returning a java.lang.String.

ID проблемы	Резюме
GR-58687	Fix missing return value conversion in Polyglot.eval[File].
GR-58689	Add a new guide: Troubleshoot Native Image Run-Time Errors.
GR-58690	Typeflow.getState() cleanup
GR-58691	Track metadata conditions only when they are used.
GR-58699	Improve documentation for the sandbox.UseLowMemoryTrigger option.
GR-58703	Preserve capsule name identity
GR-58707	avoid reading a tuple if an exception happens
GR-58708	Process thread local actions while waiting for CExt Load.
GR-58710	Compilation alarm test: check for scaled periods.
GR-58716	Fix issues uncovered by init memory verification
GR-58717	Do not ignore null edges in graphio BinaryReader
GR-58908	Fix interacting with non-Illvm JNI libraries when using nfi-Illvm
GR-58910	Move the java-register benchmark to interop suite
GR-58912	Handle mixing overloaded operators with non-numeric primitives.
GR-58914	Espresso: Add support for passing all GC options directly to the VM.
GR-58919	Fix Truffle host inlining may peek into native calls and fail.

ID проблемы	Резюме
GR-58922	Update SyncPort info.
GR-58924	Analysis Cleanup
GR-58924	Make sure onInputSaturated and onObservedSaturated are executed only once
GR-58925	Support unbuffered standard output
GR-58928	Add helper tool to generate GC graphs
GR-58930	Fix other context guest object behavior for void methods.
GR-58932	Update gate to use GDB 14.2.
GR-58935	List running tests when an external test-suite is terminated.
GR-58938	Correction of the buffer reset of a shared WebAssembly.Memory.
GR-58950	Use JavaVersionUtil.JAVA_SPEC where applicable and avoid direct reference to GuardsStage enums.
GR-58951	Add missing JVMCI package exports.
GR-58964	Default --wasm.DirectByteBufferMemoryAccess to false.
GR-58966	Update CENSUS.md.
GR-58967	Fix invoking interface methods and overridden default methods through jdwp.
GR-58968	Extend the registrations done by TruffleFeature.beforeAnalysis

ID проблемы	Резюме
GR-58969	Incorrect object header size in native image debuginfo.
GR-58970	Add ability to ship new patches for a released version
GR-58974	Use CallBinaryMethodNode for dispatching <i>getattr</i> callable.
GR-58991	Update SyncPort info.
GR-58992	Avoid using deprecated pipes module (removed in Python 3.13).
GR-58993	Atomics.pause: Limit the number of spin-wait loop iterations.
GR-58993	Implement Atomics.pause proposal.
GR-58994	Implementation of Error.isError proposal.
GR-58995	Implement iterator-sequencing proposal.
GR-58996	GraalWasm: Remove the content duplicated on GitHub.
GR-58998	Update labsjdk to 24+19-jvmci-b01
GR-58999	Support invoke non-virtual jdkwp invoke option.
GR-59003	Safepoint refactorings.
GR-59005	Fix inverted order for longest compile times in CTW output
GR-59009	Introduce track across layers flag.
GR-59010	Revert broken graalpython import

ID проблемы	Резюме
GR-59021	Do not emit prefetch allocates with SerialGC
GR-59025	Fix of top-level for-await-of in a module.
GR-59029	Fix coverage after sulong managed removal.
GR-59029	GraalPy launcher main class can be final now that the enterprise launcher is gone.
GR-59029	Umbrella for smaller cleanups.
GR-59032	Fix conflicting fetch_jdk arguments in mx bisect
GR-59042	Relax encodingLogic assertion
GR-59045	Do not ignore enqueued messages when Worker is finished.
GR-59047	Add 'micronaut-pegasus' to the 'barista-native-image' suite
GR-59048	Remove or replace JDK21 jobs for GraalWasm.
GR-59052	Remove or replace JDK21 jobs for Sulong on master.
GR-59056	Espresso: update dacapo benchmark list.
GR-59058	Fix default tp_free etc slots for builtin classes
GR-59058	PyType_Modified should not modify native slots
GR-59062	Espresso processors: support inner classes in <code>getInternalName</code> .

ID проблемы	Резюме
GR-59063	Espresso: when continuations are enabled, ensure lambdas are always serializable.
GR-59072	Create parent constant before loading relinked constant
GR-59073	Failing gdb-debughelpers tests.
GR-59074	Promote PGO options on Optimizations and Performance entry page.
GR-59082	Backport to 24.2: Grow memories at an exponential rate.
GR-59084	Fix urls in Maven scripts.
GR-59084	Revise descriptions for Maven artifacts.
GR-59084	Revise Maven descriptions.
GR-59084	Revise Maven descriptions for Truffle and GraalWasm.
GR-59086	Fix spelling of Native Image IncludeMethodData option.
GR-59093	Test262 revision bump and fixes of some new tests.
GR-59095	Fix handling internal and interop exceptions on top level
GR-59098	Use default devtools for WABT and bump to 1.0.36
GR-59103	Fix indentation in option help text spanning multiple lines in util.args
GR-59115	Transient fetch test failure on darwin-amd64.
GR-59117	Fix missing state for StoreIndexedNode.

ID проблемы	Резюме
GR-59123	Update labsjdk to 24+20-jvmci-b01
GR-59124	Handle multiple ValueProxyNodes in removeIntermediateMaterialization
GR-59133	Minimum RSS threshold to do background GC
GR-59151	Add Truffle TCK ErrorTypeTest Javadoc.
GR-59180	Update third party license file.
GR-59182	Begin feature freeze for the 24.2 release.
GR-59182	Prepare the release branches.
GR-59182	Update mx version.
GR-59246	Compilation alarm time test: just verify we waited a positive amount.
GR-59257	Make it easy to use EXTRA_IMAGE_BUILDER_ARGUMENTS in env files and fix incremental build issues.
GR-59260	TRegex: add weekly coverage build.
GR-59275	Use nanoTime derived milliseconds for various timeouts and watchdogs
GR-59279	Update the status of test suites.
GR-59282	svm: Always use SubstrateConstructorAccessor for serialization (adopt removal of SerializationConstructorAccessorGenerator in JDK-8327624)
GR-59284	Implement Vector API masked load

ID проблемы	Резюме
GR-59296	Remove --strict-image-heap option from documentation (enabled by default).
GR-59298	Incorrect compressed oop calculation for hubs in gdb-debughelpers.
GR-59302	Fix downstream issues in tests
GR-59302	New test runner
GR-59304	Refactor WrappedVarRef.
GR-59307	Adapt to the future removal of the ZGenerational flag
GR-59309	Graalpy gradle plugin does not build if project does not contain any resource files.
GR-59316	Add missing cache write in GetForeignObjectClassNode
GR-59324	Workarounds for layered image reloading quirks.
GR-59326	Ensure ForkJoin commonPool parallelism always respects NativeImageOptions.NumberOfThreads.
GR-59329	Add option to outline SerialGC post-write barrier snippets
GR-59330	Update ICU4J to 76.1 (Unicode 16, CLDR 46).
GR-59338	Make js.locale option stable and allowed in sandboxed mode.
GR-59340	Saturate all reachable methods in open world.
GR-59341	Upgrade XZ for Java to 1.10.

ID проблемы	Резюме
GR-59347	Espresso: Implement Field resolution in LinkResolver.
GR-59352	Handle bigint when finding primitive constructor names for error msgs.
GR-59353	FFM API: Allow upcalls in configuration files.
GR-59373	Add ondemand builder for windows and macos graalpy wheels.
GR-59373	Merge GraalPy public and internal wheelbuilder.
GR-59373	Update error message on windows when failing to import C extensions.
GR-59375	Update labsjdk to 24+21-jvmci-b01
GR-59402	Adjustments for graph builder plugins
GR-59404	PUncicler.loadInst should throw exception if a class can't be found.
GR-59415	Add assertions to native-image layer build command
GR-59422	Avoid sun_nio_ch_NativeThread pthread_kill on sulong
GR-59427	Look for AnalysisReportJsonFileRule file correctly when diagnostics are on for a bundle based benchmark
GR-59428	Use NULL for unused reserved JNIEnv fields
GR-59436	Do not use Graal as JIT when running NativeImage driver.
GR-59438	Add a missing permalink.
GR-59438	Anchor links in text not responding.

ID проблемы	Резюме
GR-59439	Adapt JDK-8340796: Use a consistent order when loading cxq and EntryList
GR-59440	Fix getScopeSlowPath
GR-59444	Increase max heap size of Native Image builder to match Quarkus' CI
GR-59445	Ensure Word fields are saturated when unavailable.
GR-59446	Add test for nested locks
GR-59448	Omit LLVM execution from coverage gate
GR-59463	Immortalize native Py_True and Py_False
GR-59465	Fix disabling debugger stepping too aggressively.
GR-59466	Measure and upload libgraal image size when building libgraal for benchmarks
GR-59474	Refactor timers to account for layer archiving.
GR-59479	adopt JDK-8338383: Implement JEP 491: Synchronize Virtual Threads without Pinning.
GR-59480	Github PR #449: fix pymongo.patch for more pymongo versions
GR-59482	Align image heap end when using mremap
GR-59485	Cleanup NativeImageBuilder.
GR-59492	System.out/err usage in PolyglotLoggers.
GR-59497	TRegex: fix OracleDB flavor incorrectly parsing escaped surrogate pairs.

ID проблемы	Резюме
GR-59499	Fix System.getProperties() when called from virtual thread.
GR-59503	Stricter checks for CFG and schedule validity
GR-59515	Invokes with 0 callees are not unreachable in open analysis.
GR-59526	Update labsjdk to 24+22-jvmci-b01
GR-59531	Call fiber.finishedLatch.countDown() in afterLeave()
GR-59531	Use Thread#join() to wait for Fibers instead of a CountdownLatch
GR-59532	Unify SnippetTemplate.Arguments.add() and SnippetTemplate.Arguments.addConst()
GR-59533	Test and refresh Include Reachability Metadata Native Image guides.
GR-59535	Fix infinite recursion in InteropLibrary.Asserts#assertMetaObject
GR-59538	Fix JDWP valid class loader check.
GR-59539	Ensure arrays have sufficient sizes.
GR-59544	Remove unreachable specializations on JSIdenticalNode
GR-59545	Fix unreachable specializations.
GR-59554	Fix race in disposing JDWP debugger connection.
GR-59559	Fix master-to-galahad merge conflict 2024-11-04
GR-59563	Remove python-tagged-unittest-sandboxed

ID проблемы	Резюме
GR-59565	Add <code>RootNode.prepareForCompilation(...)</code> to delay compilation and offload expensive work to the compiler thread.
GR-59566	Avoid requiring <code>sun/nio/ch/NativeThread.currentO</code> .
GR-59582	Better messages for <code>OutOfMemoryErrors</code> and small cleanups/bugfixes.
GR-59591	Generate javadoc in a single directory.
GR-59629	Implement Vector API masked write operation
GR-59630	Adapt JDK-8341903: Implementation of Scoped Values (Fourth Preview)
GR-59638	Only run file-size benchmark when building libgraal
GR-59640	Add <code>IOException</code> checked exception to <code>InternalResource.versionHash(Env)</code> .
GR-59645	Remove invalid assert
GR-59651	Link the troubleshooting guide in the GitHub issue template.
GR-59659	Fix and improve retagger
GR-59661	Further refine <code>CustomGraalClassLoader</code> support for libgraal building.
GR-59669	Remove <code>System.exit</code> call from <code>TruffleFromLibGraalEntryPoints</code> .
GR-59677	Implement <code>setCurrentWorkingDirectory</code> in <code>VirtualFileSystem</code> .
GR-59678	Update <code>SyncPort</code> info.
GR-59680	Fix master-to-galahad merge conflict 2024-11-07

ID проблемы	Резюме
GR-59685	Update labsjdk to 24+23-jvmci-b01
GR-59688	Allow compiler newer than Truffle runtime in a minor version.
GR-59699	Make PosixPlatformTimeUtils.javaTimeSystemUTC uninterruptible
GR-59714	Remove calls to System.currentTimeMillis().
GR-59717	Added hook for object reachability notifications to Native Image API.
GR-59766	Add iprof docs and schema to the reference manual.
GR-59766	Update link to iprof-v1.0.0.schema.json.
GR-59782	Ensure vtables are calculated for all types when using open world analysis.
GR-59787	Update SyncPort info.
GR-59795	Random failures in JS Test262.
GR-59797	Use JSRuntime.isNegativeZero() to check for -0.0 (#868).
GR-59798	Fix JDK21 compatibility issue after JDK-8341645.
GR-59804	Ensure full watchdog interval is available per method in LIRNativeImageCodeCache.patchMethods.
GR-59807	Restore support for ACCESS_VM_ANNOTATION.
GR-59809	Filter StringConcatFactory.CACHE to only include reachable types in the image

ID проблемы	Резюме
GR-59829	Fix wheelbuilder github actions.
GR-59830	Verify that the image heap is mapped correctly.
GR-59836	Update labsjdk to 24+24-jvmci-b01
GR-59840	Fix virtual thread migration for synchronized native calls.
GR-59841	GradlePluginProject use Gradle plugin portal through mx url rewrites.
GR-59841	Polish GraalPy Gradle plugin.
GR-59845	Improve loading of base layer elements
GR-59858	Mark type of hidden field reachable.
GR-59861	Handle intrinsics called from non-snippet root methods with a bailout
GR-59866	Add Dir.from_fd, Dir.fchdir and Dir#chdir methods
GR-59866	Add IO#pread and IO#pwrite methods
GR-59866	Add missing io-related functions
GR-59866	Add Module#set_temporary_name method
GR-59866	Add ObjectSpace::WeakMap#delete
GR-59866	Add Range#overlap?
GR-59866	Add Range#reverse_each method

ID проблемы	Резюме
GR-59866	Add <code>rb_data_define()</code> C function
GR-59866	Add <code>Refinement#target</code>
GR-59866	Emit a warning when <code>it</code> call without arguments is used in a block without parameters
GR-59866	Follow up for PR "Add missing io-related functions"
GR-59866	Improve validation of a <code>Time.new</code> single String argument
GR-59866	<code>Kernel#lambda</code> raises when given non-lambda, non-literal block (#3753)
GR-59866	Make <code>Thread::[Queue, SizedQueue]#freeze</code> raise <code>TypeError</code> (#3730)
GR-59866	raise <code>ArgumentError</code> on unknown directive <code>Array pack/ String unpack</code> (#3727)
GR-59866	Remove deprecated <code>Encoding#replicate</code> method
GR-59866	<code>Socket#recv*</code> methods return <code>nil</code> instead of an empty String on closed connections
GR-59866	Support <code>Proc#initialize_{dup, copy}</code> for subclasses
GR-59866	Support <code>symbolize_names</code> argument to <code>MatchData#named_captures</code>
GR-59866	Update <code>NoMethodError</code> message to not use <code>object#inspect</code> (#3749)
GR-59871	Expose overflow API.
GR-59877	Update <code>SyncPort</code> info.

ID проблемы	Резюме
GR-59878	Adopt mx fix for CompilerDaemon hang.
GR-59879	Correct the name of Profile-Guided Optimization to singular.
GR-59893	Tagged tests for windows
GR-59897	Fix documentation for the sandbox.MaxHeapMemory resource limit.
GR-59898	Failure of SourceInternalizationTest#testSourceInterning.
GR-59898	Run SourceInternalizationTest#testSourceInterning in a subprocess.
GR-59902	Fix clinic-generated arg indices for builtins with var args
GR-59911	Persist ImageHeapConstant id across layers
GR-59921	Improve jdwp connection logic.
GR-59922	Update SyncPort info.
GR-59924	Fix JFR-specific substitution on JDK21.
GR-59926	Drop windows gate from galahad gates
GR-59927	Populate missing VM dimensions in file-size benchmarks.
GR-59931	Renaissance 0.16.0
GR-59932	Port JDK-8341527: AVX-512 intrinsic for SHA3
GR-59934	Disable problematic Spark benchmarks in Renaissance for latest jdk

ID проблемы	Резюме
GR-59936	Support pydantic-core 2.26
GR-59952	Add some owner files for Native Image.
GR-59957	ArrayLengthNode: ensure non alive inputs are also added to the graph.
GR-59959	Change package name computation for hybrid objects.
GR-59963	Fix stamps in ReadExceptionObjectNode
GR-59964	Fix checkcopyright in sulong style gate.
GR-59966	Fix duplication of BciBlocks.
GR-59969	Enable ES 2025 proposals with ecmascript-version option.
GR-59976	Update labsjdk to 24+25-jvmci-b01
GR-60011	Delete CompositeValueClass.
GR-60012	Fix usages of System.out/err in CFGPrinterObserver
GR-60018	Revert recent ContextPauseTest#testPauseManyThreads change in order to prevent hangs.
GR-60020	Fix layouted to laid out.
GR-60022	Consider newDelegatingFileSystem API.
GR-60022	Map files in shared objects to relative paths for debugging on other systems.
GR-60022	Use newDelegatingFileSystem API.

ID проблемы	Резюме
GR-60044	Use runtime ClassLoader for unique name support.
GR-60053	Update overlay
GR-60056	Replicate bench jobs on x52
GR-60059	Avoid duplicated code in SecuritySubstitutions (JDK-8344787)
GR-60061	Handle VFS extracted files like symlinks.
GR-60074	Fix wheelbuilder shell scripts and windows dll bundling.
GR-60075	Allow using different LocationIdentities with ObjectHeader.initializeObjectHeader
GR-60079	JFR leak profiler fixes.
GR-60081	Update aarch64 to use the 8.1-a instruction set by default.
GR-60091	Add a new doc native-image/JCmd.md to TOC for dev and jdk24 versions.
GR-60092	Implement PyThreadState_SetAsyncExc.
GR-60093	svm: workaround for missing BoundMethodHandle.Species_L registration
GR-60096	Support passing positional (args) and keyword arguments (*kwargs) from Java to Python
GR-60098	Add GRAALPY_VERSION, generate pyconfig.h
GR-60106	Update compiler docs.

ID проблемы	Резюме
GR-60120	Support scipy 1.13.1
GR-60134	Add warning when parsing args with spaces in mx_sdk_benchmark.parse_prefixed_args
GR-60143	ReadOnlyFileSystem.newByteChannel fails for regular file if openOptions contains NOFOLLOW_LINKS.
GR-60159	Fix java-register.py benchmark
GR-60163	Minor fixes to (Invoke)Dynamic constant pool entries.
GR-60173	Register custom module-info compilation participant for JDK builds without JMODs #10161.
GR-60176	JFR Old Object Sampler fixes.
GR-60184	Correction of the reading from foreign objects in JSON.stringify().
GR-60185	Make <code>ExitOnOutOfMemoryError</code> a simple <code>RuntimeOptionKey</code> .
GR-60186	Update labsjdk to 24+26-jvmci-b01
GR-60187	Update SyncPort info.
GR-60190	Improve suitable JDK version lookup for Gradle build.
GR-60191	Refactor coverage gates, run on multiple platforms
GR-60207	Process did not finish in expected time in ProcessBuilderTest#testRedirectToStream.

ID проблемы	Резюме
GR-60213	Bytecode DSL: disallow uncached compilation & fix docs
GR-60217	Enable sun.misc.Unsafe access in launchers.
GR-60229	Use gradle wrapper to build org.graalvm.python.gradle.plugin.
GR-60230	Ensure only safepoint usages left.
GR-60242	Some methods must not be executed before feature registration has finished.
GR-60243	JMH based benchmarks.
GR-60268	Test context cancellation with multithreading.
GR-60283	Update more patches
GR-60301	Fix Truffle DSL warnings.
GR-60307	Start 25.0.0 dev cycle.
GR-60309	Disable downstream-graal-jdklatest jobs.
GR-60314	Fix: use gradlew.bat on Windows.
GR-60347	Backport to 24.2: Include language resources in native image.
GR-60357	Unrecognized option: sun-misc-unsafe-memory-access=allow.
GR-60365	Backport GR-58550.
GR-60366	Backport to 24.2: Bytecode DSL annotation processor NPE with boxing variant fallback instruction.

ID проблемы	Резюме
GR-60367	Backport to 24.2: Bytecode DSL compiler intrinsics are not compatible with older Truffle versions.
GR-60379	Make InternalResourceCache#useInternalResources compilation constant.
GR-60380	Support for Object.assign(target, foreignArray).
GR-60392	Update pydantic-core, make it work on windows
GR-60399	Fix GIL hold count assertion in PythonContext.releaseGil.
GR-60402	Add vzeroupper upon the entrance of AMD64 sha1 and sha256 stubs.
GR-60402	Backport to 24.2: [JDK-8346653] Add vzeroupper upon the entrance of AMD64 sha1 and sha256 stubs.
GR-60428	Backport to 24.2: Allow combination of captureCallState and critical(true)
GR-60445	Fix failing benchmark jobs.
GR-60446	Use a built python home for running benchmarks
GR-60471	Failing weekly-vm-ee-truffle-maven-isolate-jdklatest-darwin-amd64 gate.
GR-60496	Parse Wasm modules directly from JS.
GR-60510	Update labsjdk to 24+29-jvmci-b01
GR-60540	Backport to 24.2.0: Miscompilation found by fuzzing (InjectLoopCounterStamps).
GR-60541	Normative: updating the order of plural categories.

ID проблемы	Резюме
GR-60541	Recent Intl-related normative changes.
GR-60542	Normative: limiting some steps of NumberFormat constructor to standard notation.
GR-60568	Rename graalpy_virtualenv
GR-60570	Backport to 24.2: Fix registration of VM diagnostics.
GR-60581	Backport to 24.2: Update labsjdk to 24+27-jvmci-b01.
GR-60604	Improve causality reporting for unresolved elements.
GR-60609	Inject graalpy-virtualenv dependency into virtualenv
GR-60612	Reenable neon on aarch64.
GR-60615	Backport to 24.2: Upgrade ASM dependency to 9.7.1.
GR-60617	Update to a newer version of ANTLR4.
GR-60660	Multi context C extensions with copying
GR-60665	Backport to 24.2: Process did not finish in expected time in ProcessBuilderTest#testRedirectToStream.
GR-60667	Backport to 24.2: Failing weekly-vm-ee-truffle-maven-isolate-jdklatest-darwin-amd64 gate.
GR-60668	Work around incomplete C++20 support on macOS 11.7.
GR-60681	Backport to 24.2: Fix weekly gates failing on JDK-21.

ID проблемы	Резюме
GR-60683	Backport to 24.2: Add Gradle as dependency for GraalPy.
GR-60688	Backport to 24.2: TRegex: NFA generator overhaul.
GR-60735	Add ignored tests for ctypes return struct by value - unsupported feature for now.
GR-60775	Removing an obsolete problematic hack in ExecuteNativePropertyHandlerNode.
GR-60798	Backport to 24.2: Fix int overflow in ObjectSizeCalculator#increaseByArraySize.
GR-60802	Execution result of some modules was not stored.
GR-60816	Add sys.exception()
GR-60827	Update labsjdk to 24+30-jvmci-b01
GR-60868	Backport to 24.2: Cut off control flow at merges with incompatible lock stacks.
GR-60871	Backport to 24.2: Adapt PartialConfigurationWithOrigins to reachability-metadata.json
GR-60878	Gradle project: use mx.get_tools_jdk instead of mx.get_jdk.
GR-60881	Update bundled sqlite3 and bundled PyPy files
GR-61071	TRegex: fix corner cases in NFATraversalRegexASTVisitor.
GR-61088	Make sure we run the TCK tests through the Truffle suite command.

ID проблемы	Резюме
GR-61196	Skip test-process-get-builtin.mjs when tools is imported.
GR-61197	Retry transiently failing waitAsync tests.
GR-61245	Skip transients in pandas benchmarks.
GR-61261	Mask constant shift amount for reassociation
GR-61268	Backport to 24.2: Ignore unresolvable resource bundle classes instead of crashing the build
GR-61281	Switch ruby-test-mri-linux-amd64 CI job to native-ee to workaround fatal OOM issue
GR-61340	Backport to 24.2: Parse Wasm modules directly from JS.
GR-61341	Backport to 24.2: Fix br_table branch profiles.
GR-61364	Backport to 24.2: Fix state optimization with fallback implicit casts.
GR-61383	Adapt to JLine 3.28.
GR-61388	Update labsjdk to 24+31-jvmci-b01
GR-61390	Fix BuildPhaseProvider.is*Finished() so that these methods can be used at any time during the image build.
GR-61398	Update checkstyle to 10.21.0 and assign CI components.
GR-61417	Fixes for deepeval
GR-61424	Update labsjdk to 24+32-jvmci-b01

ID проблемы	Резюме
GR-61430	Espresso 24.2 backports.
GR-61462	Build pyexpat module on Windows too
GR-61464	Minor docs updates.
GR-61466	Backport to 24.2: Upgrade JLine to 3.28.
GR-61474	Upgrading the underlying Node.js to version 22.13.1.
GR-61475	Backport to 24.2.1: CE Unrolling must track which loops are created already.
GR-61481	Fix tier_count values in CPU sampler JSON output.
GR-61499	Build bz2 module for windows
GR-61500	Avoid sending dead stubs to PyTruffleObject_ReplicateNativeReferences
GR-61520	Backport to 24.2: Upgrade ANTLR to 4.13.2.
GR-61522	VirtualFileSystem: support multiple VFS conflicting sources in one app, support namespacing and isolating the VFS.
GR-61527	Backport to 24.2: Add MaximumCompilations option.
GR-61531	Fix native storage refcounting
GR-61539	Backport to 24.2: Fix tier_count values in CPU sampler JSON output.
GR-61623	Backport to 24.2: Keep existing speciesData objects in cache at run-time
GR-61648	Update labsjdk to 24+33-jvmci-b01

ID проблемы	Резюме
GR-61665	Backport for 24.2: Enable the Panama NFI backend by default
GR-61685	Fix <code>IllegalAccessError</code> due to missing export
GR-61686	Fix <code>IllegalAccessError</code> due to missing export
GR-61697	Backport to 24.2: Fix and improve GHA gate.
GR-61700	Backport to 24.2: Update XZ version.
GR-61846	Backport to 24.2: Handle <code>WebAssembly.Memory</code> sizes $> = 2\text{GB}$ when accessing buffer property.
GR-61862	Update <code>labsjdk</code> to 24+34-jvmci-b01
GR-61865	Backport to 24.2: Rethrow internal errors during <code>PythonLanguage#initializeContext</code> .
GR-61866	Backport to 24.2: Order traits in <code>GetForeignObjectClassNode</code> and move the remaining trait-specific methods from <code>ForeignObject</code> to the dedicated trait classes.
GR-61867	Backport to 24.2: Change the log level of 'Unexpected executable for slot pointer' messages to fine.
GR-61881	Backport to 24.2: Move the longest running Gradle Kotlin tests to the 'long running' batch.
GR-61902	Transient crash in <code>JavaCallWrapper</code> .
GR-61994	Update <code>labsjdk</code> to 24+36-jvmci-b01
GR-62011	Backport to 24.2: Transient crash in <code>JavaCallWrapper</code> .

ID проблемы	Резюме
GR-62016	Backport to 24.2: Avoid symbol versioning issues in shim libraries.
GR-62039	Backport to 24.2: Ensure resolved module imports are only used by the importing module.
GR-62040	Backport to 24.2: Fix element-wise Array.prototype.splice.
GR-62052	Optimize DynamicObjectLibrary.removeKey.
GR-62079	Backport to 24.2: Error message implies Promise rejected in sync modules.
GR-62408	Backport to 24.2: WASM allows SandboxPolicy.CONSTRAINED.
GR-62456	Backport to 24.2: GraalPy Maven plugin incorrectly prints warning about default resources directory.
GR-62515	Backport to 24.2: Sort properties by name during encode/decode.
GR-62597	Backport to 24.2: Fall back to non-containerized bundle build for --static.
GR-62624	Fix StaticProperty.javaHome to reflect user input.
GR-62649	Backport to 24.2: TruffleJWS version updated.
GR-8351	Re-enable MarkUnsafeAccessTest on aarch64.

6. Обновление Axiom NIK Pro

Чтобы поддерживать актуальность и безопасность вашего экземпляра Axiom NIK Pro, всегда обновляйтесь до последней доступной версии после ее выпуска. Для обновления установите новую версию поверх предыдущей. Инструкции по установке см. в разделе *Поддержка Axiom NIK Pro* на странице [Инструментарий Нативных Образов Axiom NIK Pro](#), либо в разделе документации на [портале поддержки](#). Доступ к этому portalу предоставляется клиентам с активным договором поддержки. После входа на портал поддержки, если у вас есть несколько активных проектов, выберите нужный проект из выпадающего списка "Выберите проект" вверху страницы под именем пользователя. В зависимости от выбранного проекта вам будет доступна ссылка на необходимый документ.

