

NAME

v8 — Google’s JavaScript engine

SYNOPSIS

```
shell [options] [--shell] [file...]  
d8    [options] [-e string] [--shell] [--module] file...
```

OPTIONS

-- Capture all remaining arguments in JavaScript.

-**e** *string*
Execute *string* in V8.

--**shell**
Run an interactive JavaScript shell.

--**help**
Print flags and usage message to stdout, then exit.

--**module**
Execute *file* as a JavaScript module.

Note: the **--module** option is implicitly enabled for *.mjs files.

V8 FLAGS

Option names beginning with “no-” pertain to a boolean V8 flag enabled by default.

--**abort-on-uncaught-exception**
Abort program (dump core) when an uncaught exception is thrown.

--**no-adjust-os-scheduling-parameters**
Don’t adjust OS-specific scheduling parameters for the isolate.

--**no-allocation-site-pretenuing**
Don’t pretenu with allocation sites.

--**allow-natives-for-differential-fuzzing**
Only allow natives that’re explicitly whitelisted for differential fuzzers.

--**allow-natives-for-fuzzing**
Only allow natives that’re explicitly whitelisted for fuzzers.

--**allow-natives-syntax**
Allow natives syntax.

--**allow-unsafe-function-constructor**
Allow invoking the function constructor without security checks.

--**always-compact**
Perform compaction on every full GC.

--always-opt

Always try to optimise functions.

--always-osr

Always try to OSR functions.

--no-always-promote-young-mc

Don't promote young objects indiscriminately during mark-compact.

--no-analyze-environment-liveness

Don't analyse liveness of environment slots and zap dead values.

--arm-arch

Type: String

Default: "armv8"

Generate instructions for the selected ARM architecture if available: armv6, armv7, armv7+sudiv or armv8.

--asm-wasm-lazy-compilation

Enable lazy compilation for asm-wasm modules.

--assert-types

Generate runtime type assertions to test the typer.

--assume-asmjs-origin

Force WASM decoder to assume input is internal asm-wasm format.

--no-async-stack-traces

Exclude async stack traces in `Error.stack`.

--block-concurrent-recompilation

Block queued jobs until released.

--budget-for-feedback-vector-allocation

Type: Int

Default: 1024

The budget in amount of bytecode executed by a function before we decide to allocate feedback vectors.

--builtins-in-stack-traces

Show built-in functions in stack traces.

--no-cache-prototype-transitions

Don't cache prototype transitions.

--check-icache
Check icache flushes in ARM and MIPS simulator.

--clear-exceptions-on-js-entry
Clear pending exceptions when entering JavaScript.

--clear-free-memory
Initialise free memory with 0.

--code-comments
Emit comments in code disassembly; for more readable source positions you should add `--no-concurrent-recompilation`.

--no-compact-code-space
Don't compact code space on full collections.

--no-compilation-cache
Disable compilation cache.

--compiler-dispatcher
Enable compiler dispatcher.

--concurrent-allocation
Concurrently allocate in old space.

--no-concurrent-array-buffer-freeing
Don't free array buffer allocations on a background thread.

--no-concurrent-array-buffer-sweeping
Don't sweep array buffers concurrently.

--concurrent-inlining
Run optimising compiler's inlining phase on a separate thread.

--no-concurrent-marking
Don't use concurrent marking.

--no-concurrent-recompilation
Force synchronous optimisation of hot functions.

--concurrent-recompilation-delay
Type: Int
Default: 0

Artificial compilation delay in ms.

--concurrent-recompilation-queue-length
Type: Int
Default: 8

The length of the concurrent compilation queue.

--no-concurrent-store-buffer

Don't use concurrent store buffer processing.

--no-concurrent-sweeping

Don't use concurrent sweeping.

--correctness-fuzzer-suppressions

Suppress certain unspecified behaviours to ease correctness fuzzing: abort program when the stack overflows or a string exceeds maximum length (as opposed to throwing `RangeError`), and use a fixed suppression string for error messages.

--cpu-profiler-sampling-interval

Type: Int

Default: 1000

CPU profiler sampling interval in microseconds.

--csa-trap-on-node

Type: String

Default: NULL

Trigger break point when a node with given id is created in given stub. The format is:Stub-Name,NodeId.

--debug-code

Generate extra code (assertions) for debugging.

--debug-sim

Enable debugging the simulator.

--deopt-every-n-times

Type: Int

Default: 0

Deoptimise every n times a deopt point is passed.

--detailed-error-stack-trace

Include arguments for each function call in the error stack frames array.

--detailed-line-info

Always generate detailed line information for CPU profiling.

--no-detect-ineffective-gcs-near-heap-limit

Don't trigger out-of-memory failure to avoid GC storm near heap limit.

--disable-abortjs

Disable AbortJS runtime function.

--disable-old-api-accessors

Disable old-style API accessors whose setters trigger through the prototype chain.

--disallow-code-generation-from-strings

Disallow `eval` and friends.

--dump-counters

Dump counters on exit.

--dump-counters-nvp

Dump counters as name-value pairs on exit.

--dump-wasm-module-path

Type: String

Default: NULL

Directory to dump WASM modules to.

--embedded-src

Type: String

Default: NULL

Path for the generated embedded data file. (mksnapshot only).

--embedded-variant

Type: String

Default: NULL

Label to disambiguate symbols in embedded data file. (mksnapshot only).

--enable-32dregs

Type: maybe_bool

Default: unset

Deprecated (use `--arm-arch` instead).

--enable-armv7

Type: maybe_bool

Default: unset

Deprecated (use `--arm-arch` instead).

--enable-armv8

Type: maybe_bool

Default: unset

Deprecated (use `--arm-arch` instead).

--no-enable-avx

Disable use of AVX instructions if available.

--no-enable-bmi1

Disable use of BMI1 instructions if available.

--no-enable-bmi2

Disable use of BMI2 instructions if available.

--no-enable-fma3

Disable use of FMA3 instructions if available.

--no-enable-lazy-source-positions

Don't skip generating source positions during initial compile, but regenerate when actually required.

--no-enable-lzcnt

Disable use of LZCNT instruction if available.

--enable-neon

Type: maybe_bool

Default: unset

Deprecated (use --arm-arch instead).

--enable-one-shot-optimization

Enable size optimisations for code that will only be executed once.

--no-enable-popcnt

Disable use of POPCNT instruction if available.

--no-enable-regexp-unaligned-accesses

Disable unaligned accesses for the regexp engine.

--no-enable-sahf

Disable use of SAHF instruction if available (X64 only).

--enable-source-at-csa-bind

Include source information in the binary at CSA bind locations.

--no-enable-sse3

Disable use of SSE3 instructions if available.

--no-enable-sse4-1

Disable use of SSE4.1 instructions if available.

--no-enable-sse4-2

Disable use of SSE4.2 instructions if available.

--no-enable-ssse3

Disable use of SSSE3 instructions if available.

--enable-sudiv

Type: maybe_bool

Default: unset

Deprecated (use --arm-arch instead).

--enable-vfp3

Type: maybe_bool

Default: unset

Deprecated (use --arm-arch instead).

--ephemeron-fixpoint-iterations

Type: Int

Default: 10

Number of fixpoint iterations it takes to switch to linear ephemeron algorithm.

--es-staging

Internal use only.

Enable test-worthy Harmony features.

--experimental-stack-trace-frames

Enable experimental frames (API/Builtins) and stack trace layout.

--experimental-wasm-anyref

Enable prototype anyref opcodes for WASM.

--experimental-wasm-bigint

Enable prototype JS BigInt support for WASM.

--no-experimental-wasm-bulk-memory

Disable prototype bulk memory opcodes for WASM.

--experimental-wasm-compilation-hints

Enable prototype compilation hints section for WASM.

--experimental-wasm-eh

Enable prototype exception handling opcodes for WASM.

--experimental-wasm-gc

Enable prototype garbage collection for WASM.

--experimental-wasm-mv

Enable prototype multi-value support for WASM.

--experimental-wasm-return-call
Enable prototype return call opcodes for WASM.

--experimental-wasm-simd
Enable prototype SIMD opcodes for WASM.

--experimental-wasm-threads
Enable prototype thread opcodes for WASM.

--experimental-wasm-type-reflection
Enable prototype WASM type reflection in JS for WASM.

--expose-async-hooks
Expose `async_hooks` object.

--expose-cputracemark-as
Type: String
Default: NULL

Expose `cputracemark` extension under the specified name.

--expose-externalize-string
Expose `externalize string` extension.

--expose-gc
Expose `gc` extension.

--expose-gc-as
Type: String
Default: NULL

Expose `gc` extension under the specified name.

--expose-inspector-scripts
Expose `injected-script-source.js` for debugging.

--expose-trigger-failure
Expose `trigger-failure` extension.

--no-expose-wasm
Don't expose WASM interface to JavaScript.

--no-fast-math
Don't enable faster, potentially less accurate, math functions.

--fast-promotion-new-space
Fast promote new space on high survival rates.

--feedback-normalization

Feed back normalisation to constructors.

--finalize-streaming-on-background

Perform script streaming finalisation on the background thread.

--no-flush-bytecode

Don't flush bytecode that hasn't executed recently.

--force-long-branches

Force all emitted branches to be in long mode (MIPS/PPC only).

--force-marking-deque-overflows

Force overflows of marking deque by reducing its size to 64 words.

--force-slow-path

Always take the slow path for builtins.

--frame-count

Type: Int

Default: 1

Number of stack frames inspected by the profiler.

--function-context-specialization

Enable function context specialization in TurboFan.

--future

Implies all staged features that we want to ship in the not-too-far future.

--fuzzer-gc-analysis

Print number of allocations and enable analysis mode for GC fuzz-testing, e.g. `--stress-marking`, `--stress-scavenge`.

--fuzzer-random-seed

Type: Int

Default: 0

Default seed for initialising fuzzer random generator (0, the default, means to use v8's random number generator seed).

--fuzzing

Cause intrinsics to fail silently by returning `undefined` for invalid usage.

--gc-experiment-background-schedule

Use new background GC schedule heuristics.

--gc-experiment-less-compaction

Use less compaction in non-memory reducing mode.

--gc-fake-mmap

Type: String

Default: `"/tmp/___v8_gc__"`

Specify the name of the file for fake gc mmap used in `ll_prof`.

--gc-freelist-strategy

Type: Int

Default: 5

Freelist strategy to use. Supported values and their meanings are:

0	FreeListLegacy
1	FreeListFastAlloc
2	FreeListMany
3	FreeListManyCached
4	FreeListManyCachedFastPath
5	FreeListManyCachedOrigin

--gc-global

Always perform global GCs.

--gc-interval

Type: Int

Default: -1

Garbage collect after *N* allocations.

--gc-stats

Type: Int

Default: 0

Used by tracing internally to enable gc statistics.

--gdbjit

Enable GDBJIT interface.

--gdbjit-dump

Dump ELF objects with debug info to disk.

--gdbjit-dump-filter

Dump only objects containing this substring.

--gdbjit-full

Enable GDBJIT interface for all code objects.

--no-global-gc-scheduling
Disable GC scheduling based on global memory.

--no-hard-abort
Don't abort by crashing.

--harmony
Enable all completed Harmony features.

--no-harmony-dynamic-import
Disable dynamic import.

--no-harmony-import-meta
Disable `import.meta` property.

--harmony-intl-dateformat-day-period
Add `dayPeriod` option to `DateTimeFormat`.

--no-harmony-intl-dateformat-fractional-second-digits
Don't add `fractionalSecondDigits` option to `DateTimeFormat`.

--harmony-intl-displaynames-date-types
In progress.

Enable `Intl.DisplayNames` date types.

--harmony-intl-segmenter
Enable `Intl.Segmenter`.

--harmony-logical-assignment
Enable logical assignment.

--no-harmony-namespace-exports
Disable namespace exports (`export * as foo from "bar"`).

--no-harmony-private-methods
Disable private methods in class literals.

--no-harmony-promise-all-settled
Disable `Promise.allSettled`.

--harmony-promise-any
Enable `Promise.any`.

--harmony-regexp-match-indices
In progress.

Enable `regexp` match indices.

--harmony-regexp-sequence

In progress.

Enable RegExp Unicode sequence properties.

--no-harmony-sharedarraybuffer

Disable SharedArrayBuffer.

--no-harmony-shipping

Disable all shipped Harmony features.

--harmony-string-replaceall

Enable String.prototype.replaceAll.

--harmony-top-level-await

Enable top-level await.

--no-harmony-weak-refs

Disable weak references.

--harmony-weak-refs-with-cleanup-some

In progress.

Enable weak references with FinalizationRegistry.prototype.cleanupSome.

--hash-seed

Type: Uint64

Default: 0

Fixed seed to use to hash property keys (0 means random). With snapshots this option cannot override the baked-in seed.

--heap-growing-percent

Type: Int

Default: 0

Specifies heap growing factor as $(1 + \text{heap_growing_percent} / 100)$.

--heap-profiler-trace-objects

Dump heap object allocations/movements/size_updates.

--no-heap-profiler-use-embedder-graph

Don't use the new EmbedderGraph API to get embedder nodes.

--heap-snapshot-string-limit

Type: Int

Default: 1024

Truncate strings to this length in the heap snapshot.

--histogram-interval**Type:** Int**Default:** 600000

Time interval in ms for aggregating memory histograms.

--no-huge-max-old-generation-size

Don't increase maximum size of the old space to 4 GB for x64 systems with the physical memory bigger than 16 GB.

--no-icu-timezone-data

Don't get information about timezones from ICU.

--no-ignition-elide-noneffectful-bytecodes

Don't elide bytecodes which won't have any external effect.

--no-ignition-filter-expression-positions

Don't filter expression positions before the bytecode pipeline.

--no-ignition-reo

Don't use ignition register equivalence optimiser.

--no-ignition-share-named-property-feedback

Don't share feedback slots when loading the same named property from the same object.

--no-incremental-marking

Don't use incremental marking.

--incremental-marking-hard-trigger**Type:** Int**Default:** 0

Threshold for starting incremental marking immediately in percent of available space: ("limit" - "size").

--incremental-marking-soft-trigger**Type:** Int**Default:** 0

Threshold for starting incremental marking via a task in percent of available space: ("limit" - "size").

--no-incremental-marking-task

Don't use tasks for incremental marking.

--no-incremental-marking-wrappers

Don't use incremental marking for marking wrappers.

--initial-heap-size**Type:** size_t**Default:** 0

Initial size of the heap (in MBytes).

--initial-old-space-size**Type:** size_t**Default:** 0

Initial old space size (in MBytes).

--no-inline-new

Don't use fast inline allocation.

--interpreted-frames-native-stack

Show interpreted frames on the native stack (useful for external profilers).

--interrupt-budget**Type:** Int**Default:** 147456

Interrupt budget which should be used for the profiler counter.

--jitless

Disable runtime allocation of executable memory.

--no-lazy

Don't use lazy compilation.

--no-lazy-feedback-allocation

Don't allocate feedback vectors lazily.

--no-liftoff

Disable Liftoff, the baseline compiler for WebAssembly.

--lite-mode

Enable trade-off of performance for memory savings.

--ll-prof

Enable low-level Linux profiler.

--local-heaps

Allow heap access from background tasks.

--log

Minimal logging (no API, code, GC, suspect, or handles samples).

--log-all
Log all events to the log file.

--log-api
Log API events to the log file.

--log-code
Log code events to the log file without profiling.

--no-log-colour
Don't use coloured output when logging.

--log-function-events
Log function events (parse, compile, execute) separately.

--log-handles
Log global handle events.

--log-internal-timer-events
Time internal events.

--log-source-code
Log source code.

--log-suspect
Log suspect operations.

--logfile
Type: String
Default: "v8.log"

Specify the name of the log file.

--no-logfile-per-isolate
Use a single log-file for each isolate.

--manual-evacuation-candidates-selection
Test mode only flag. It allows a unit test to select evacuation candidates pages (requires `--stress-compaction`).

--map-counters
Map counters to a file.

--max-heap-size
Type: size_t
Default: 0

Maximum size of the heap (in MBytes). Both `--max-semi-space-size` and `--max-old-space-size` take precedence. All three flags cannot be specified at the same time.

--max-inlined-bytecode-size**Type:** Int**Default:** 500

Maximum size of bytecode for a single inlining.

--max-inlined-bytecode-size-absolute**Type:** Int**Default:** 5000

Maximum cumulative size of bytecode considered for inlining.

--max-inlined-bytecode-size-cumulative**Type:** Int**Default:** 1000

Maximum cumulative size of bytecode considered for inlining.

--max-inlined-bytecode-size-small**Type:** Int**Default:** 30

Maximum size of bytecode considered for small function inlining.

--max-lazy

Ignore eager compilation hints.

--max-old-space-size**Type:** size_t**Default:** 0

Maximum size of the old space (in MBytes).

--max-optimized-bytecode-size**Type:** Int**Default:** 61440

Maximum bytecode size to be considered for optimisation; too high values may cause the compiler to hit (release) assertions.

--max-polymorphic-map-count**Type:** Int**Default:** 4

Maximum number of maps to track in POLYMORPHIC state.

--max-semi-space-size**Type:** size_t**Default:** 0

Maximum size of a semi-space (in MBytes), the new space consists of two semi-spaces.

--max-serializer-nesting**Type:** Int**Default:** 25

Maximum levels for nesting child serialisers.

--max-stack-trace-source-length**Type:** Int**Default:** 300

Maximum length of function source code printed in a stack trace.

--mcpu**Type:** String**Default:** "auto"

Enable optimisation for a specific CPU.

--no-memory-reducer

Don't use memory reducer.

--no-memory-reducer-for-small-heaps

Don't use memory reducer for small heaps.

--min-inlining-frequency**Type:** Float**Default:** 0.15

Minimum frequency for inlining.

--min-semi-space-size**Type:** size_t**Default:** 0

Minimum size of a semi-space (in MBytes), the new space consists of two semi-spaces.

--minor-mc

Perform young generation mark compact GCs.

--no-minor-mc-parallel-marking

Don't use parallel marking for the young generation.

--mock-arraybuffer-allocator

Use a mock ArrayBuffer allocator for testing.

--mock-arraybuffer-allocator-limit**Type:** size_t**Default:** 0

Memory limit for mock ArrayBuffer allocator used to simulate OOM for testing.

--no-modify-field-representation-inplace

Disable in-place field representation updates.

--no-move-object-start

Disable moving of object starts.

--native-code-counters

Generate extra code for manipulating stats counters.

--never-compact

Testing only.

Never perform compaction on full GC.

--no-opt

Don't use adaptive optimisations.

--optimize-for-size

Enable optimisations which favour memory size over execution speed.

--no-page-promotion

Don't promote pages based on utilisation.

--page-promotion-threshold

Type: Int

Default: 70

Minimum percentage of live bytes on a page to enable fast evacuation.

--no-parallel-compaction

Don't use parallel compaction.

--parallel-compile-tasks

Enable parallel compile tasks.

--no-parallel-marking

Don't use parallel marking in atomic pause.

--no-parallel-pointer-update

Don't use parallel pointer update during compaction.

--no-parallel-scavenge

Disable parallel scavenging.

--parse-only

Only parse the sources.

--no-partial-constant-pool
Disable use of partial constant pools (X64 only).

--no-polymorphic-inlining
Disable polymorphic inlining.

--predictable
Enable predictable mode.

--predictable-gc-schedule
Predictable garbage collection schedule. Fixes heap growing, idle, and memory reducing behavior.

--prepare-always-opt
Prepare for turning on always opt.

--print-all-exceptions
Print exception object and stack trace on each thrown exception.

--print-bytecode
Print bytecode generated by ignition interpreter.

--print-bytecode-filter
Type: String
Default: "*"

Filter for selecting which functions to print bytecode.

--print-deopt-stress
Print number of possible deopt points.

--print-nci-code
Print native context-independent code.

--print-opt-source
Print source code of optimised and inlined functions.

--print-wasm-code
Print WebAssembly code.

--print-wasm-stub-code
Print WebAssembly stub code.

--prof
Log statistical profiling information (implies --log-code).

--no-prof-browser-mode
Turn off browser-compatible mode when profiling with --prof.

--prof-cpp

Like `--prof`, but ignore generated code.

--prof-sampling-interval

Type: Int

Default: 1000

Interval for `--prof` samples (in microseconds).

--profile-deserialization

Print the time it takes to deserialise the snapshot.

--random-gc-interval

Type: Int

Default: 0

Collect garbage after `random(0, X)` allocations. It overrides `--gc-interval`.

--random-seed

Type: Int

Default: 0

Default seed for initialising random generator (0, the default, means to use system random).

--randomize-all-allocations

Randomise virtual memory reservations by ignoring any hints passed when allocating pages.

--no-randomize-hashes

Don't randomise hashes to avoid predictable hash collisions (with snapshots this option cannot override the baked-in seed).

--rcs

Report runtime call-counts and times.

--rcs-cpu-time

Report runtime times in CPU time (the default is wall-time).

--redirect-code-traces

Output deopt information and disassembly into file `"code-pid-isolate-id.asm"`.

--redirect-code-traces-to

Type: String

Default: NULL

Output deopt information and disassembly into the given file.

--regexp-interpret-all

Interpret all regexp code.

--regexp-mode-modifiers

Enable inline flags in regexp.

--no-regexp-optimization

Don't generate optimised regexp code.

--no-regexp-peephole-optimization

Disable peephole optimisation for regexp bytecode.

--no-regexp-tier-up

Disable regexp interpreter. The default behaviour is to tier-up to the compiler after the number of executions set by `--regexp-tier-up-ticks`

--regexp-tier-up-ticks

Type: Int

Default: 1

Set the number of executions for the regexp interpreter before tiering-up to the compiler.

--no-rehash-snapshot

Don't rehash strings from the snapshot to override the baked-in seed.

--reserve-inline-budget-scale-factor

Type: Float

Default: 1.2

Maximum cumulative size of bytecode considered for inlining.

--retain-maps-for-n-gc

Type: Int

Default: 2

Keeps maps alive for *N* old space garbage collections.

--reuse-opt-code-count

Type: Int

Default: 0

Don't discard optimised code for the specified number of deopts.

--runtime-call-stats

Report runtime call-counts and times.

--sampling-heap-profiler-suppress-randomness

Use constant sample intervals to eliminate test flakiness.

--scavenge-separate-stack-scanning

Use a separate phase for stack-scanning during scavenge.

--no-scavenge-task

Don't schedule scavenge tasks.

--scavenge-task-trigger

Type: Int

Default: 80

Scavenge task trigger in percent of the current heap limit.

--no-script-streaming

Disable parsing on background.

--semi-space-growth-factor

Type: Int

Default: 2

Factor by which to grow the new space.

--serialization-chunk-size

Type: Uint

Default: 4096

Custom size for serialization chunks.

--serialization-statistics

Collect statistics on serialized objects.

--sim-stack-alignment

Type: Int

Default: 8

Stack alignment in bytes in simulator (4 or 8, 8 is default).

--sim-stack-size

Type: Int

Default: 2048

Stack size of the ARM64, MIPS64 and PPC64 simulator in kBytes (default is 2 MB).

--single-threaded

Disable the use of background tasks.

--stack-size

Type: Int

Default: 984

Default size of stack region v8 is allowed to use (in kBytes).

--stack-trace-limit**Type:** Int**Default:** 10

Number of stack frames to capture.

--stack-trace-on-illegal

Print stack trace when an illegal exception is thrown.

--startup-blob**Type:** String**Default:** NULL

Write V8 startup blob file. (mksnapshot only).

--startup-src**Type:** String**Default:** NULL

Write V8 startup as C++ src. (mksnapshot only).

--stop-sim-at**Type:** Int**Default:** 0

Simulator stop after *X* number of instructions.

--stress-background-compile

Stress-test background parsing.

--stress-compaction

Stress the GC compactor to flush out bugs (implies `--force-marking-deque-over-flows`).

--stress-compaction-random

Stress GC compaction by selecting random percent of pages as evacuation candidates. It overrides `--stress-compaction`.

--stress-flush-bytecode

Stress bytecode flushing.

--stress-gc-during-compilation

Simulate GC/compiler thread race related to <https://crbug.com/v8/8520>.

--stress-incremental-marking

Force incremental marking for small heaps and run it more often.

--stress-inline

Set high thresholds for inlining to inline as much as possible.

--stress-lazy-source-positions

Collect lazy source positions immediately after lazy compilation.

--stress-marking

Type: Int

Default: 0

Force marking at random points between 0 and X (inclusive) percent of the regular marking start limit.

--stress-per-context-marking-worklist

Use per-context worklist for marking.

--stress-runs

Type: Int

Default: 0

Number of stress runs.

--stress-sampling-allocation-profiler

Type: Int

Default: 0

Enable sampling allocation profiler with X as a sample interval.

--stress-scavenge

Type: Int

Default: 0

Force scavenge at random points between 0 and X (inclusive) percent of the new space capacity.

--stress-validate-asm

Try to validate everything as asm.js.

--stress-wasm-code-gc

Stress-test garbage collection of WASM code.

--suppress-asm-messages

Don't emit asm.js related messages (for golden file testing).

--target-arch

Type: String

Default: NULL

The mksnapshot target architecture. (mksnapshot only).

--target-is-simulator

Instruct mksnapshot that the target is meant to run in the simulator and it can generate simulator-specific instructions. (mksnapshot only).

--target-os**Type:** String**Default:** NULL

The mksnapshot target OS. (mksnapshot only).

--test-small-max-function-context-stub-size

Enable testing the function context size overflow path by making the maximum size smaller.

--testing-float-flag**Type:** Float**Default:** 2.5

Float-flag.

--testing-int-flag**Type:** Int**Default:** 13

Testing_int_flag.

--testing-maybe-bool-flag**Type:** maybe_bool**Default:** unset

Testing_maybe_bool_flag.

--testing-prng-seed**Type:** Int**Default:** 42

Seed used for threading test randomness.

--testing-string-flag**Type:** String**Default:** "Hello, world!"

String-flag.

--no-thin-strings

Disable ThinString support.

--trace

Trace function calls.

--trace-all-uses

Trace all use positions.

--trace-allocation-stack-interval**Type:** Int**Default:** -1

Print stack trace after N free-list allocations.

--trace-allocations-origins

Show statistics about the origins of allocations. Combine with `--no-inline-new` to track allocations from generated code.

--trace-asm-parser

Verbose logging of asm.js parse failures.

--trace-asm-scanner

Log tokens encountered by asm.js scanner.

--trace-asm-time

Log asm.js timing info to the console.

--trace-block-coverage

Trace collected block coverage information.

--trace-compiler-dispatcher

Trace compiler dispatcher activity.

--trace-concurrent-marking

Trace concurrent marking.

--trace-concurrent-recompilation

Track concurrent recompilation.

--trace-deopt

Trace optimise function deoptimisation.

--trace-detached-contexts

Trace native contexts that are expected to be garbage collected.

--trace-duplicate-threshold-kb**Type:** Int**Default:** 0

Print duplicate objects in the heap if their size is more than given threshold.

--trace-environment-liveness

Trace liveness of local variable slots.

--trace-evacuation

Report evacuation statistics.

--trace-evacuation-candidates

Show statistics about the pages evacuation by the compaction.

--trace-file-names

Include file names in trace-opt/trace-deopt output.

--trace-for-in-enumerate

Trace for-in enumerate slow-paths.

--trace-fragmentation

Report fragmentation for old space.

--trace-fragmentation-verbose

Report fragmentation for old space (detailed).

--trace-gc

Print one trace line following each garbage collection.

--trace-gc-freelists

Print details of each freelist before and after each major garbage collection.

--trace-gc-freelists-verbose

Print details of freelists of each page before and after each major garbage collection.

--trace-gc-ignore-scavenger

Do not print trace line after scavenger collection.

--trace-gc-nvp

Print one detailed trace line in name=value format after each garbage collection.

--trace-gc-object-stats

Trace object counts and memory usage.

--trace-gc-verbose

Print more details following each garbage collection.

--trace-generalization

Trace map generalisation.

--trace-heap-broker

Trace the heap broker (reports on missing data only).

--trace-heap-broker-memory

Trace the heap broker memory (refs analysis and zone numbers).

--trace-heap-broker-verbose

Trace the heap broker verbosely (all reports).

--trace-ic

Trace inline cache state transitions for tools/ic-processor.

--trace-idle-notification

Print one trace line following each idle notification.

--trace-idle-notification-verbose

Print the heap state used by the idle notification.

--trace-ignition-codegen

Trace the codegen of ignition interpreter bytecode handlers.

--trace-ignition-dispatches

Traces the dispatches to bytecode handlers by the ignition interpreter.

--trace-ignition-dispatches-output-file

Type: String

Default: NULL

The file to which the bytecode handler dispatch table is written (by default, the table is not written to a file).

--trace-incremental-marking

Trace progress of the incremental marking.

--trace-maps

Trace map creation.

--no-trace-maps-details

Don't log map details.

--trace-migration

Trace object migration.

--trace-minor-mc-parallel-marking

Trace parallel marking for the young generation.

--trace-mutator-utilization

Print mutator utilisation, allocation speed, GC speed.

--trace-opt

Trace lazy optimisation.

--trace-opt-stats

Trace lazy optimisation statistics.

--trace-opt-verbose

Extra verbose compilation tracing.

--trace-osr
Trace on-stack replacement.

--trace-parallel-scavenge
Trace parallel scavenge.

--trace-pretenuing
Trace pretenuing decisions of HAllocate instructions.

--trace-pretenuing-statistics
Trace allocation site pretenuing statistics.

--trace-protector-invalidation
Trace protector cell invalidations.

--trace-prototype-users
Trace updates to prototype user tracking.

--trace-rail
Trace RAIL mode.

--trace-regexp-assembler
Trace regexp macro assembler calls.

--trace-regexp-bytecodes
Trace regexp bytecode execution.

--trace-regexp-parser
Trace regexp parsing.

--trace-regexp-peephole-optimization
Trace regexp bytecode peephole optimisation.

--trace-regexp-tier-up
Trace regexp tiering-up execution.

--trace-representation
Trace representation types.

--trace-serializer
Print code serializer trace.

--trace-side-effect-free-debug-evaluate
Print debug messages for side-effect-free debug-evaluate for testing.

--trace-sim
Trace simulator execution.

--trace-sim-messages

Trace simulator debug messages. Implied by `--trace-sim`.

--trace-store-elimination

Trace store elimination.

--trace-stress-marking

Trace stress marking progress.

--trace-stress-scavenge

Trace stress scavenge progress.

--trace-track-allocation-sites

Trace the tracking of allocation sites.

--trace-turbo

Trace generated TurboFan IR.

--trace-turbo-alloc

Trace TurboFan's register allocator.

--trace-turbo-ceq

Trace TurboFan's control equivalence.

--trace-turbo-cfg-file

Type: String

Default: NULL

Trace turbo cfg graph (for C1 visualiser) to a given file name.

--trace-turbo-filter

Type: String

Default: "*"

Filter for tracing turbofan compilation.

--trace-turbo-graph

Trace generated TurboFan graphs.

--trace-turbo-inlining

Trace TurboFan inlining.

--trace-turbo-jt

Trace TurboFan's jump threading.

--trace-turbo-load-elimination

Trace TurboFan load elimination.

--trace-turbo-loop
Trace TurboFan's loop optimisations.

--trace-turbo-nci
Trace native context-independent code.

--trace-turbo-path
Type: String
Default: NULL

Directory to dump generated TurboFan IR to.

--trace-turbo-reduction
Trace TurboFan's various reducers.

--trace-turbo-scheduled
Trace TurboFan IR with schedule.

--trace-turbo-scheduler
Trace TurboFan's scheduler.

--trace-turbo-trimming
Trace TurboFan's graph trimmer.

--no-trace-turbo-types
Don't trace TurboFan's types.

--trace-unmapper
Trace the unmapping.

--trace-verify-csa
Trace code stubs verification.

--trace-wasm-ast-end
Type: Int
Default: 0

End function for WASM AST trace (exclusive).

--trace-wasm-ast-start
Type: Int
Default: 0

Start function for WASM AST trace (inclusive).

--trace-wasm-code-gc
Trace garbage collection of WASM code.

--trace-wasm-memory

Print all memory updates performed in WASM code.

--trace-zone-stats

Trace zone memory usage.

--no-track-computed-fields

Don't track computed boilerplate fields.

--no-track-detached-contexts

Don't track native contexts that are expected to be garbage collected.

--no-track-double-fields

Don't track fields with double values.

--no-track-field-types

Don't track field types.

--no-track-fields

Don't track fields with only SMI values.

--track-gc-object-stats

Track object counts and memory usage.

--no-track-heap-object-fields

Don't track fields with heap values.

--track-retaining-path

Enable support for tracking retaining path.

--no-turbo-allocation-folding

Disable TurboFan allocation folding.

--no-turbo-cf-optimization

Don't optimise control flow in TurboFan.

--no-turbo-control-flow-aware-allocation

Don't consider control flow while allocating registers.

--no-turbo-escape

Disable escape analysis.

--turbo-fast-api-calls

Enable fast API calls from TurboFan.

--turbo-filter

Type: String

Default: "*"

Optimisation filter for TurboFan compiler.

--no-turbo-inline-array-builtins

Don't inline array builtins in TurboFan code.

--no-turbo-inlining

Disable inlining in TurboFan.

--turbo-instruction-scheduling

Enable instruction scheduling in TurboFan.

--no-turbo-jt

Disable jump threading in TurboFan.

--no-turbo-load-elimination

Disable load elimination in TurboFan.

--no-turbo-loop-peeling

Disable TurboFan loop peeling.

--no-turbo-loop-rotation

Disable TurboFan loop rotation.

--no-turbo-loop-variable

Disable TurboFan loop variable optimisation.

--no-turbo-move-optimization

Don't optimise gap moves in TurboFan.

--turbo-nci

Enable experimental native context-independent code.

--turbo-nci-as-highest-tier

Replace default TF with NCI code as the highest tier for testing purposes.

--turbo-profiling

Enable profiling in TurboFan.

--no-turbo-rewrite-far-jumps

Don't rewrite far to near jumps (ia32,x64).

--turbo-sp-frame-access

Use stack pointer-relative access to frame wherever possible.

--no-turbo-splitting

Don't split nodes during scheduling in TurboFan.

--turbo-stats
Print TurboFan statistics.

--turbo-stats-nvp
Print TurboFan statistics in machine-readable format.

--turbo-stats-wasm
Print TurboFan statistics of WASM compilations.

--no-turbo-store-elimination
Disable store-store elimination in TurboFan.

--turbo-stress-instruction-scheduling
Randomly schedule instructions to stress dependency tracking.

--turbo-verify
Verify TurboFan graphs at each phase.

--turbo-verify-allocation
Verify register allocation in TurboFan.

--turbo-verify-machine-graph
Type: String
Default: NULL

Verify TurboFan machine graph before instruction selection.

--turboprop
Enable experimental turboprop mid-tier compiler.

--no-unbox-double-arrays
Don't automatically unbox arrays of doubles.

--untrusted-code-mitigations
Enable mitigations for executing untrusted code.

--use-external-strings
Use external strings for source code.

--no-use-ic
Don't use inline caching.

--no-use-idle-notification
Don't use idle notification to reduce memory footprint.

--no-use-marking-progress-bar
Don't use a progress bar to scan large objects in increments when incremental marking is active.

--no-use-osr

Don't use on-stack replacement.

--use-strict

Enforce strict mode.

--no-use-verbose-printer

Disable verbose printing.

--v8-os-page-size

Type: Int

Default: 0

Override OS page size (in KBytes).

--no-validate-asm

Don't validate asm.js modules before compiling.

--vtune-prof-annotate-wasm

Load WebAssembly source-map and provide annotate support. Used when `v8_enable_vtunejit` is enabled. Experimental.

--no-wasm-async-compilation

Disable actual asynchronous compilation for `WebAssembly.compile`.

--wasm-atomics-on-non-shared-memory

Allow atomic operations on non-shared WebAssembly memory.

--no-wasm-bounds-checks

Disable bounds checks (disable for performance testing only).

--no-wasm-code-gc

Disable garbage collection of WASM code.

--wasm-expose-debug-eval

Expose WASM evaluator support on the CDP.

--wasm-fuzzer-gen-test

Generate a test case when running a WASM fuzzer.

--no-wasm-grow-shared-memory

Forbid growing shared WebAssembly memory objects.

--wasm-lazy-compilation

Enable lazy compilation for all WASM modules.

--wasm-lazy-validation

Enable lazy validation for lazily-compiled WASM functions.

--no-wasm-math-intrinsics

Don't intrinsify some Math imports into WASM.

--wasm-max-code-space

Type: Uint

Default: 1024

Maximum committed code space for WASM (in MB).

--wasm-max-initial-code-space-reservation

Type: Int

Default: 0

Maximum size of the initial WASM code space reservation (in MB).

--wasm-max-mem-pages

Type: Uint

Default: 32767

Maximum initial number of 64KiB memory pages of a WASM instance.

--wasm-max-mem-pages-growth

Type: Uint

Default: 65536

Maximum number of 64KiB pages a WASM instance's memory can grow to.

--wasm-max-table-size

Type: Uint

Default: 10000000

Maximum table size of a WASM instance.

--wasm-num-compilation-tasks

Type: Int

Default: 128

Maximum number of parallel compilation tasks for WASM.

--wasm-opt

Enable WASM optimisation.

--wasm-simd-post-mvp

Allow experimental SIMD operations for prototyping that aren't included in the current proposal.

--no-wasm-stack-checks

Disable stack checks (disable for performance testing only).

--wasm-staging

Enable staged WASM features.

--wasm-test-streaming

Use streaming compilation instead of async compilation for tests.

--wasm-tier-mask-for-testing

Type: Int

Default: 0

Bitmask of functions to compile with TurboFan instead of Liftoff.

--no-wasm-tier-up

Disable tier-up to the optimising compiler (requires `--liftoff` to have an effect).

--no-wasm-trap-handler

Don't use signal handlers to catch out of bounds memory access in WASM (currently Linux x86_64 only).

--wasm-write-protect-code-memory

Write protect code memory on the WASM native heap.

--no-win64-unwinding-info

Disable unwinding info for Windows/x64.

--no-write-protect-code-memory

Don't write protect code memory.

--no-young-generation-large-objects

Don't allocate large objects by default in the young generation large object space.

SEE ALSO

node(1)

AUTHORS

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