```
File
             Sort metric
 Load...
             At t-end (bytes)
Invocation {
 Mode: heap
 Command: ./target/debug/rusty-v8-memtest
 PID:
          3190
Times {
 t-gmax: 26,767,971 instrs (90.99% of program duration)
 t-end: 29,419,331 instrs
▼ PP 1/1 (7 children) {
              2,766,643 bytes (100%, 94,041.67/Minstr) in 3,129 blocks (100%, 106.36/Minstr), avg size 884.19 bytes, avg lifetime 9,314,033.33 instrs (31.66% of program duration)
    Total:
   At t-gmax: 664,059 bytes (100%) in 1,134 blocks (100%), avg size 585.59 bytes
   At t-end: 6,970 bytes (100%) in 47 blocks (100%), avg size 148.3 bytes
              11,247,491 bytes (100%, 382,316.34/Minstr), 4.07/byte
              3,643,971 bytes (100%, 123,863.15/Minstr), 1.32/byte
   Writes:
   Allocated at {
     #0: [root]
   PP 1.1/7 (2 children) {
                  29,160 bytes (1.05%, 991.19/Minstr) in 91 blocks (2.91%, 3.09/Minstr), avg size 320.44 bytes, avg lifetime 25,210,166.43 instrs (85.69% of program duration)
        Total:
        At t-gmax: 23,064 bytes (3.47%) in 88 blocks (7.76%), avg size 262.09 bytes
        At t-end: 3,056 bytes (43.85%) in 3 blocks (6.38%), avg size 1,018.67 bytes
                  39,606 bytes (0.35%, 1,346.26/Minstr), 1.36/byte
                  33,426 bytes (0.92%, 1,136.19/Minstr), 1.15/byte
        Writes:
        Allocated at {
          #1: 0x4B9DBF: alloc (alloc.rs:98)
          #2: 0x4B9DBF: alloc::alloc::Global::alloc_impl (alloc.rs:181)
       -▼ PP 1.1.1/2 (3 children) {
                      20,176 bytes (0.73%, 685.81/Minstr) in 11 blocks (0.35%, 0.37/Minstr), avg size 1,834.18 bytes, avg lifetime 24,226,582 instrs (82.35% of program duration)
           At t-gmax: 14,144 bytes (2.13%) in 10 blocks (0.88%), avg size 1,414.4 bytes
           At t-end: 3,032 bytes (43.5%) in 2 blocks (4.26%), avg size 1,516 bytes
                      24,663 bytes (0.22%, 838.33/Minstr), 1.22/byte
                      19,532 bytes (0.54%, 663.92/Minstr), 0.97/byte
           Writes:
           Allocated at {
              ^1: 0x4B9DBF: alloc (alloc.rs:98)
             ^2: 0x4B9DBF: alloc::alloc::Global::alloc impl (alloc.rs:181)
             #3: 0x4BA90F: <alloc::alloc::Global as core::allocator>::allocate (alloc.rs:241)
           -▼ PP 1.1.1.1/3 (2 children) {
                          1,896 bytes (0.07%, 64.45/Minstr) in 2 blocks (0.06%, 0.07/Minstr), avg size 948 bytes, avg lifetime 27,413,448.5 instrs (93.18% of program duration)
               At t-gmax: 1,896 bytes (0.29%) in 2 blocks (0.18%), avg size 948 bytes
               At t-end: 1,888 bytes (27.09%) in 1 blocks (2.13%), avg size 1,888 bytes
                          1,136 bytes (0.01%, 38.61/Minstr), 0.6/byte
                Writes:
                          1,136 bytes (0.03%, 38.61/Minstr), 0.6/byte
                Allocated at {
                  ^1: 0x4B9DBF: alloc (alloc.rs:98)
                  ^2: 0x4B9DBF: alloc::alloc::Global::alloc impl (alloc.rs:181)
                  ^3: 0x4BA90F: <alloc::alloc::Global as core::allocator>::allocate (alloc.rs:241)
                  #4: 0x49DF6B: alloc::raw_vec::RawVec<T,A>::allocate_in (raw_vec.rs:184)
                  #5: 0x2E913B: with_capacity_in<v8::external_references::ExternalReference, alloc::alloc::Global> (raw_vec.rs:130)
                  #6: 0x2E913B: with_capacity_in<v8::external_references::ExternalReference, alloc::alloc::Global> (mod.rs:670)
                 #7: 0x2E913B: alloc::vec::Vec<T>::with_capacity (mod.rs:479)
                  PP 1.1.1.1.1/2 {
                    Total:
                              1,888 bytes (0.07%, 64.18/Minstr) in 1 blocks (0.03%, 0.03/Minstr), avg size 1,888 bytes, avg lifetime 27,392,830 instrs (93.11% of program duration)
                              0 bytes in 0 blocks, avg size 0 bytes
                    At t-gmax: 1,888 bytes (0.28%) in 1 blocks (0.09%), avg size 1,888 bytes
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At t-end: 1,888 bytes (27.09%) in 1 blocks (2.13%), avg size 1,888 bytes Reads: 1,136 bytes (0.01%, 38.61/Minstr), 0.6/byte

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1,136 bytes (0.03%, 38.61/Minstr), 0.6/byte
             Writes:
             Allocated at {
                ^1: 0x4B9DBF: alloc (alloc.rs:98)
                ^2: 0x4B9DBF: alloc::alloc::Global::alloc_impl (alloc.rs:181)
                ^3: 0x4BA90F: <alloc::alloc::Global as core::alloc::Allocator>::allocate (alloc.rs:241)
                ^4: 0x49DF6B: alloc::raw_vec::RawVec<T,A>::allocate_in (raw_vec.rs:184)
                ^5: 0x2E913B: with_capacity_in<v8::external_references::ExternalReference, alloc::alloc::Global> (raw_vec.rs:130)
                ^6: 0x2E913B: with_capacity_in<v8::external_references::ExternalReference, alloc::alloc::Global> (mod.rs:670)
                ^7: 0x2E913B: alloc::vec::Vec<T>::with_capacity (mod.rs:479)
               #8: 0x294BCF: deno_core::runtime::bindings::external_references (bindings.rs:30)
               #9: 0x2D4FA7: deno_core::runtime::jsruntime::JsRuntime::new_inner (jsruntime.rs:626)
               #10: 0x2D41BF: deno_core::runtime::jsruntime::JsRuntime::new (jsruntime.rs:498)
               #11: 0x238EB7: rusty_v8_memtest::main (main.rs:3)
               #12: 0x239293: core::ops::function::FnOnce::call_once (function.rs:250)
               #13: 0x23930F: std::sys_common::backtrace::__rust_begin_short_backtrace (backtrace.rs:154)
               #14: 0x239247: std::rt::lang_start::{{closure}} (rt.rs:166)
            PP 1.1.1.1.2/2 {
             At t-end: 0 bytes (0%)
             Allocated at {
                [1 insignificant]
        PP 1.1.1.2/3 {
         Total:
                    1,144 bytes (0.04%, 38.89/Minstr) in 1 blocks (0.03%, 0.03/Minstr), avg size 1,144 bytes, avg lifetime 27,376,803 instrs (93.06% of program duration)
                    0 bytes in 0 blocks, avg size 0 bytes
         Max:
         At t-gmax: 1,144 bytes (0.17%) in 1 blocks (0.09%), avg size 1,144 bytes
          At t-end: 1,144 bytes (16.41%) in 1 blocks (2.13%), avg size 1,144 bytes
                    1,160 bytes (0.01%, 39.43/Minstr), 1.01/byte
          Writes:
                    1,144 bytes (0.03%, 38.89/Minstr), 1/byte
          Allocated at {
            ^1: 0x4B9DBF: alloc (alloc.rs:98)
            ^2: 0x4B9DBF: alloc::alloc::Global::alloc_impl (alloc.rs:181)
            ^3: 0x4BA90F: <alloc::alloc::Global as core::allocator>::allocate (alloc.rs:241)
            #4: 0x49EC6F: alloc::raw_vec::RawVec<T,A>::allocate_in (raw_vec.rs:184)
            #5: 0x2E3467: with capacity in<isize, alloc::alloc::Global> (raw vec.rs:130)
            #6: 0x2E3467: with_capacity_in<isize, alloc::alloc::Global> (mod.rs:670)
            #7: 0x2E3467: with capacity<isize> (mod.rs:479)
            #8: 0x2E3467: <alloc::vec::Vec<T> as alloc::vec::spec_from_iter_nested::SpecFromIterNested<T,I>>::from_iter (spec_from_iter_nested.rs:54)
            #9: 0x2F1933: <alloc::vec::Vec<T> as alloc::vec::spec_from_iter::SpecFromIter<T,I>>::from_iter (spec_from_iter.rs:33)
            #10: 0x2F17AF: <alloc::vec::Vec<T> as core::iter::traits::collect::FromIterator<T>>::from_iter (mod.rs:2696)
            #11: 0x2FA773: core::iter::traits::iterator::Iterator::collect (iterator.rs:2053)
            #12: 0x294FE3: new (external_references.rs:47)
            #13: 0x294FE3: deno core::runtime::bindings::external references (bindings.rs:79)
            #14: 0x2D4FA7: deno_core::runtime::jsruntime::JsRuntime::new_inner (jsruntime.rs:626)
            #15: 0x2D41BF: deno core::runtime::jsruntime::JsRuntime::new (jsruntime.rs:498)
            #16: 0x238EB7: rusty v8 memtest::main (main.rs:3)
        PP 1.1.1.3/3 {
          At t-end: 0 bytes (0%)
         Allocated at {
            [8 insignificant]
   PP 1.1.2/2 {
     At t-end: 24 bytes (0.34%)
     Allocated at {
        [1 insignificant]
PP 1.2/7 {
            3,048 bytes (0.11%, 103.61/Minstr) in 1 blocks (0.03%, 0.03/Minstr), avg size 3,048 bytes, avg lifetime 27,016,235 instrs (91.83% of program duration)
 Total:
 Max:
            3,048 bytes in 1 blocks, avg size 3,048 bytes
 At t-gmax: 3,048 bytes (0.46%) in 1 blocks (0.09%), avg size 3,048 bytes
 At t-end: 3,048 bytes (43.73%) in 1 blocks (2.13%), avg size 3,048 bytes
 Reads:
            28 bytes (0%, 0.95/Minstr), 0.01/byte
 Writes:
            2,560 bytes (0.07%, 87.02/Minstr), 0.84/byte
 Allocated at {
   #1: 0xC2A183: _uhash_create(int (*)(UElement), signed char (*)(UElement, UElement), signed char (*)(UElement, UElement), int, UErrorCode*) (uhash.cpp:296)
   #2: 0xC0005B: icu_73::locale_set_default_internal(char const*, UErrorCode&) (locid.cpp:200)
   #3: 0xC0135F: icu_73::Locale::init(char const*, signed char) (locid.cpp:1845)
   #4: 0x707BBB: v8::internal::Isolate::DefaultLocale() (isolate.cc:6036)
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#5: 0x70D9B3: v8::internal::LocalIsolate::LocalIsolate(v8::internal::Isolate*, v8::internal::ThreadKind) (local-isolate.cc:28)
       #6: 0x70385B: v8::internal::Isolate::Init(v8::internal::SnapshotData*, v8::internal::SnapshotData*, v8::internal::SnapshotData*, bool) (isolate.cc:4460)
       #7: 0x7042D3: v8::internal::Isolate::InitWithSnapshot(v8::internal::SnapshotData*, v8::internal::SnapshotData*, v8::internal::SnapshotData*, bool) (isolate.cc:4178)
       #8: 0xA637EF: v8::internal::Snapshot::Initialize(v8::internal::Isolate*) (snapshot.cc:199)
       #9: 0x6765D7: v8::Isolate::Initialize(v8::Isolate*, v8::Isolate::CreateParams const&) (api.cc:9369)
       #10: 0x6766F7: v8::Isolate::New(v8::Isolate::CreateParams const&) (api.cc:9405)
       #11: 0x650427: v8::isolate::Isolate::new (isolate.rs:576)
PP 1.3/7 (2 children) {
               1,033,512 bytes (37.36%, 35,130.37/Minstr) in 2,626 blocks (83.92%, 89.26/Minstr), avg size 393.57 bytes, avg lifetime 9,621,755.81 instrs (32.71% of program duration)
     At t-gmax: 369,520 bytes (55.65%) in 976 blocks (86.07%), avg size 378.61 bytes
     At t-end: 353 bytes (5.06%) in 27 blocks (57.45%), avg size 13.07 bytes
               8,365,476 bytes (74.38%, 284,353.03/Minstr), 8.09/byte
     Writes:
               2,295,957 bytes (63.01%, 78,042.46/Minstr), 2.22/byte
     Allocated at {
       #1: 0x65B6F7: operator new(unsigned long) (new.cpp:67)
       PP 1.3.1/2 {
         At t-end: 177 bytes (2.54%)
         Allocated at {
           [258 insignificant]
       PP 1.3.2/2 {
         Total:
                   176 bytes (0.01%, 5.98/Minstr) in 11 blocks (0.35%, 0.37/Minstr), avg size 16 bytes, avg lifetime 27,529,000.36 instrs (93.57% of program duration)
                   176 bytes in 11 blocks, avg size 16 bytes
         At t-gmax: 176 bytes (0.03%) in 11 blocks (0.97%), avg size 16 bytes
         At t-end: 176 bytes (2.53%) in 11 blocks (23.4%), avg size 16 bytes
                   0 bytes (0%, 0/Minstr), 0/byte
         Writes:
                   176 bytes (0%, 5.98/Minstr), 1/byte
         Accesses: {
           ^1: 0x65B6F7: operator new(unsigned long) (new.cpp:67)
           #2: 0x654BCB: v8__CFunctionInfo__New (binding.cc:2051)
           #3: 0x2947B3: new (fast_api.rs:40)
           #4: 0x2947B3: deno_core::ops::OpCtx::new (ops.rs:192)
           #5: 0x2D7B73: deno_core::runtime::jsruntime::JsRuntime::new_inner::{{closure}} (jsruntime.rs:611)
           #6: 0x30E5EB: core::iter::adapters::map::map_fold::{{closure}} (map.rs:84)
           #7: 0x2B508B: <core::iter::adapters::enumerate::Enumerate<I> as core::iter::traits::iterator::Iterator>::fold::enumerate::{{closure}} (enumerate.rs:107)
           #8: 0x49B7FF: core::iter::traits::iterator::Iterator::fold (iterator.rs:2639)
           #9: 0x2B4FD7: <core::iter::adapters::enumerate::Enumerate<I> as core::iter::traits::iterator::Iterator>::fold (enumerate.rs:113)
           #10: 0x306AB7: <core::iter::adapters::map::Map<I,F> as core::iter::traits::iterator::Iterator>::fold (map.rs:124)
          #11: 0x30E317: core::iter::traits::iterator::Iterator::for_each (iterator.rs:857)
           #12: 0x2E9E4B: alloc::vec::Vec<T,A>::extend_trusted (mod.rs:2828)
   PP 1.4/7 {
     Total:
               224 bytes (0.01%, 7.61/Minstr) in 1 blocks (0.03%, 0.03/Minstr), avg size 224 bytes, avg lifetime 27,015,296 instrs (91.83% of program duration)
               224 bytes in 1 blocks, avg size 224 bytes
     At t-gmax: 224 bytes (0.03%) in 1 blocks (0.09%), avg size 224 bytes
     At t-end: 224 bytes (3.21%) in 1 blocks (2.13%), avg size 224 bytes
     Reads:
               195 bytes (0%, 6.63/Minstr), 0.87/byte
               87 bytes (0%, 2.96/Minstr), 0.39/byte
     Writes:
     Accesses: {
       [ 0] 1 " " " " " 4 2 " - - - - - 3 - - - - 4 2 " - - -
       [ 32] 4 " " " - - - 10 " " " 9 " " " 10 9 8 9 " 8 10 " " " " 9 - - -
        961
       [128]
       Allocated at {
       #1: 0xC00097: icu_73::locale_set_default_internal(char const*, UErrorCode&) (locid.cpp:210)
       #2: 0xC0135F: icu_73::Locale::init(char const*, signed char) (locid.cpp:1845)
       #3: 0x707BBB: v8::internal::Isolate::DefaultLocale() (isolate.cc:6036)
       #4: 0x70D9B3: v8::internal::LocalIsolate::LocalIsolate(v8::internal::Isolate*, v8::internal::ThreadKind) (local-isolate.cc:28)
       #5: 0x70385B: v8::internal::Isolate::Init(v8::internal::SnapshotData*, v8::internal::SnapshotData*, v8::internal::SnapshotData*, bool) (isolate.cc:4460)
       #6: 0x7042D3: v8::internal::Isolate::InitWithSnapshot(v8::internal::SnapshotData*, v8::internal::SnapshotData*, v8::internal::SnapshotData*, bool) (isolate.cc:4178)
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#7: 0xA637EF: v8::internal::Snapshot::Initialize(v8::internal::Isolate*) (snapshot.cc:199)
         #8: 0x6765D7: v8::Isolate::Initialize(v8::Isolate*, v8::Isolate::CreateParams const&) (api.cc:9369)
         #9: 0x6766F7: v8::Isolate::New(v8::Isolate::CreateParams const&) (api.cc:9405)
         #10: 0x650427: v8::isolate::Isolate::new (isolate.rs:576)
         #11: 0x2D53A7: deno core::runtime::jsruntime::JsRuntime::new inner (jsruntime.rs:652)
     PP 1.5/7 {
       Total:
                 123 bytes (0%, 4.18/Minstr) in 11 blocks (0.35%, 0.37/Minstr), avg size 11.18 bytes, avg lifetime 27,529,432.45 instrs (93.58% of program duration)
       Max:
                 123 bytes in 11 blocks, avg size 11.18 bytes
       At t-gmax: 123 bytes (0.02%) in 11 blocks (0.97%), avg size 11.18 bytes
       At t-end: 123 bytes (1.76%) in 11 blocks (23.4%), avg size 11.18 bytes
       Reads:
                 0 bytes (0%, 0/Minstr), 0/byte
       Writes:
                 123 bytes (0%, 4.18/Minstr), 1/byte
       Allocated at {
         #1: 0x654AA3: v8_CTypeInfo_New_From_Slice (binding.cc:2041)
         #2: 0x64F837: v8::fast api::CTypeInfo::new from slice (fast api.rs:67)
         #3: 0x2946BB: deno_core::ops::0pCtx::new (ops.rs:186)
         #4: 0x2D7B73: deno_core::runtime::jsruntime::JsRuntime::new_inner::{{closure}} (jsruntime.rs:611)
         #5: 0x30E5EB: core::iter::adapters::map_fold::{{closure}} (map.rs:84)
         #6: 0x2B508B: <core::iter::adapters::enumerate::Enumerate<I> as core::iter::traits::iterator::Iterator>::fold::enumerate::{{closure}} (enumerate.rs:107)
         #7: 0x49B7FF: core::iter::traits::iterator::Iterator::fold (iterator.rs:2639)
         #8: 0x2B4FD7: <core::iter::adapters::enumerate::Enumerate<I> as core::iter::traits::iterator::Iterator>::fold (enumerate.rs:113)
         #9: 0x306AB7: <core::iter::adapters::map::Map<I,F> as core::iter::traits::iterator::Iterator>::fold (map.rs:124)
         #10: 0x30E317: core::iter::traits::iterator::Iterator::for_each (iterator.rs:857)
         #11: 0x2E9E4B: alloc::vec::Vec<T,A>::extend_trusted (mod.rs:2828)
     PP 1.6/7 {
       At t-end: 86 bytes (1.23%)
       Allocated at {
         [33 insignificant]
     PP 1.7/7 {
       Total:
                 80 bytes (0%, 2.72/Minstr) in 1 blocks (0.03%, 0.03/Minstr), avg size 80 bytes, avg lifetime 27,016,306 instrs (91.83% of program duration)
       Max:
                 80 bytes in 1 blocks, avg size 80 bytes
       At t-gmax: 80 bytes (0.01%) in 1 blocks (0.09%), avg size 80 bytes
       At t-end: 80 bytes (1.15%) in 1 blocks (2.13%), avg size 80 bytes
       Reads:
                 80 bytes (0%, 2.72/Minstr), 1/byte
       Writes:
                 86 bytes (0%, 2.92/Minstr), 1.08/byte
       Accesses: {
         [64] 1 " " " " " " " " " - - - - -
       Allocated at {
         #1: 0xC2A0F3: _uhash_create(int (*)(UElement), signed char (*)(UElement, UElement), signed char (*)(UElement, UElement), int, UErrorCode*) (uhash.cpp:290)
         #2: 0xC0005B: icu_73::locale_set_default_internal(char const*, UErrorCode&) (locid.cpp:200)
         #3: 0xC0135F: icu_73::Locale::init(char const*, signed char) (locid.cpp:1845)
         #4: 0x707BBB: v8::internal::Isolate::DefaultLocale() (isolate.cc:6036)
         #5: 0x70D9B3: v8::internal::LocalIsolate::LocalIsolate(v8::internal::Isolate*, v8::internal::ThreadKind) (local-isolate.cc:28)
         #6: 0x70385B: v8::internal::Isolate::Init(v8::internal::SnapshotData*, v8::internal::SnapshotData*, v8::internal::SnapshotData*, bool) (isolate.cc:4460)
         #7: 0x7042D3: v8::internal::Isolate::InitWithSnapshot(v8::internal::SnapshotData*, v8::internal::SnapshotData*, bool) (isolate.cc:4178)
         #8: 0xA637EF: v8::internal::Snapshot::Initialize(v8::internal::Isolate*) (snapshot.cc:199)
         #9: 0x6765D7: v8::Isolate::Initialize(v8::Isolate*, v8::Isolate::CreateParams const&) (api.cc:9369)
         #10: 0x6766F7: v8::Isolate::New(v8::Isolate::CreateParams const&) (api.cc:9405)
         #11: 0x650427: v8::isolate::Isolate::new (isolate.rs:576)
PP significance threshold: at-t-end >= 69.7 bytes (1%)
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11 Significance emeshold de e end - OSI7 Byces (10

## Legend:

- · 't-gmax': time of global heap maximum (as measured in bytes)
- · 't-end': time of program end
- · 'instrs': instructions
- · 'Minstr': mega-instruction, i.e. one million instructions
- 'PP': program point
- 'avg': average
- '-' (in accesses): zero
   '∞' (in accesses): leaf PP counts max out at 65534; larger counts are treated as infinity

'" ' (in accesses): same as previous entry

Processing time: read:5.2ms + parse:1.2ms + build:9.8ms + display:0.9ms = total:17.1ms