Ruby master - Feature #18440

YJIT is enabled if any YJIT tuning options are set

12/27/2021 03:41 PM - georgeclaghorn (George Claghorn)

Status: Open
Priority: Normal
Assignee:
Target version:

Description
I was testing YJIT in a Rails app with RUBYOPT="--yjit --yjit-exec-mem-size=32". I saw some weird issues around Rails view caching, so I attempted to temporarily disable YJIT by removing --yjit and leaving the tuning options in place (RUBYOPT="--yjit-exec-mem-size=32"). However, YJIT remained enabled until I also removed --yjit-exec-mem-size=32.

$ ruby -e 'puts RubyVM::YJIT.runtime_stats.inspect'
nil

$ ruby --yjit-exec-mem-size --yjit-exec-mem-size=32 -e 'puts RubyVM::YJIT.runtime_stats.inspect'
{:inline_code_size=>378495, :outlined_code_size=>311079}

I expected removing --yjit to disable YJIT and was surprised by this.

History

#1 - 12/27/2021 03:42 PM - georgeclaghorn (George Claghorn)
- ruby -v changed from 3.1.0 to ruby 3.1.0p0 (2021-12-25 revision fb4df44d16) [arm64-darwin21]

#2 - 12/27/2021 03:52 PM - georgeclaghorn (George Claghorn)
Sorry, there's a small typo in the example:

$ ruby --yjit-exec-mem-size=32 -e 'puts RubyVM::YJIT.runtime_stats.inspect'
{:inline_code_size=>67775, :outlined_code_size=>52667}

#3 - 12/27/2021 10:15 PM - georgeclaghorn (George Claghorn)
From the code, this appears to be intentional. setup_yjit_options returns true if any of the --yjit-* options are provided:

```ruby
else if (strcmp("yjit", s) == 0 || setup_yjit_options(s, &opt->yjit)) {
  #if USE_MJIT
  FEATURE_SET(opt->features, FEATURE_BIT(yjit));
  #else
  rb_warn("Ruby was built without JIT support");
  #endif
}
```

#4 - 12/28/2021 04:29 AM - k0kubun (Takashi Kokubun)
- Tracker changed from Bug to Feature
- ruby -v deleted (ruby 3.1.0p0 (2021-12-25 revision fb4df44d16) [arm64-darwin21])
- Backport deleted (2.6: UNKNOWN, 2.7: UNKNOWN, 3.0: UNKNOWN, 3.1: UNKNOWN)

From the code, this appears to be intentional.

I think so. At least for MJIT in 2.6~3.0, we used to show:

- `--jit` enable JIT with default options (experimental)
- `--jit-[option]` enable JIT with an option (experimental)

but we ended up removing it in 3.1 for MJIT and YJIT. Maybe we should add such descriptions again for clarity.

#5 - 12/30/2021 08:17 PM - Eregon (Benoit Daloze)
I think only enabling on explicit --jit/--yjit/--mjit is better because it's more intuitive. If e.g. --yjit-exec-mem-size=32 is in RUBYOPT it seems unexpected that it would enable YJIT without any --yjit anywhere.