

## Ruby - Bug #17021

### "arm64" and "arm" are mixed in RbConfig on Apple silicon

07/09/2020 11:57 AM - watson1978 (Shizuo Fujita)

<b>Status:</b>	Closed		
<b>Priority:</b>	Normal		
<b>Assignee:</b>			
<b>Target version:</b>			
<b>ruby -v:</b>	ruby 2.8.0dev (2020-07-09T09:14:53Z master addbb7d16e) [arm64-darwin20]	<b>Backport:</b>	2.5: REQUIRED, 2.6: REQUIRED, 2.7: REQUIRED, 3.0: DONTNEED
<b>Description</b>			
When I checked the value of RbConfig::CONFIG on the Apple silicon macOS, I found "arm64" and "arm" are mixed as following.			
<pre>\$ ruby -v ruby 2.8.0dev (2020-07-09T09:14:53Z master addbb7d16e) [arm64-darwin20]  \$ ruby -e 'require "rbconfig"; pp RbConfig::CONFIG'   grep "arm" "/Users/watson/.rbenv/versions/2.8.0/include/ruby-2.8.0/vendor_ruby/arm64-darwin20", "/Users/watson/.rbenv/versions/2.8.0/include/ruby-2.8.0/site_ruby/arm64-darwin20", "/Users/watson/.rbenv/versions/2.8.0/include/ruby-2.8.0/arm64-darwin20", "/Users/watson/.rbenv/versions/2.8.0/lib/ruby/vendor_ruby/2.8.0/arm64-darwin20", "/Users/watson/.rbenv/versions/2.8.0/lib/ruby/site_ruby/2.8.0/arm64-darwin20", "/Users/watson/.rbenv/versions/2.8.0/lib/ruby/2.8.0/arm64-darwin20", "sitarch=&gt;"arm64-darwin20", "arch=&gt;"arm64-darwin20", "/Users/watson/.rbenv/versions/2.8.0/include/arm64-darwin20", "/Users/watson/.rbenv/versions/2.8.0/include/arm64-darwin20", "sitarchlibdir=&gt;"/Users/watson/.rbenv/versions/2.8.0/lib/arm64-darwin20", "archlibdir=&gt;"/Users/watson/.rbenv/versions/2.8.0/lib/arm64-darwin20", "/Users/watson/.rbenv/versions/2.8.0/lib/ruby/arm64-darwin20", "/Users/watson/.rbenv/versions/2.8.0/lib/ruby/arm64-darwin20", "Target: arm64-apple-darwin20.0.0\n" + "target_cpu=&gt;"arm64", "target=&gt;"arm64-apple-darwin20", "host_cpu=&gt;"arm", "host=&gt;"arm-apple-darwin20.0.0", "build_cpu=&gt;"arm", "build=&gt;"arm-apple-darwin20.0.0", "/Users/watson/.rbenv/versions/2.8.0/lib/ruby/2.8.0/arm64-darwin20", "topdir=&gt;"/Users/watson/.rbenv/versions/2.8.0/lib/ruby/2.8.0/arm64-darwin20"}</pre>			
"target_cpu" indicates "arm64", however, "host_cpu" has "arm"...			
I'd like to know whether this behavior is the right thing.			
<b>Related issues:</b>			
Related to Ruby - Bug #3565: make test-all fails to run		Closed	07/13/2010
Related to Ruby - Bug #17605: Please backport Apple Silicon arm64 vs arm bugf...		Closed	

#### Associated revisions

Revision 43a9a974e276dc49b03ec81ccace0adb534a3d20 - 11/21/2020 02:21 PM - nobu (Nobuyoshi Nakada)

[Bug #17021] Make host\_\* values consistent with target\_\*

Revision 43a9a974e276dc49b03ec81ccace0adb534a3d20 - 11/21/2020 02:21 PM - nobu (Nobuyoshi Nakada)

[Bug #17021] Make host\_\* values consistent with target\_\*

Revision 43a9a974 - 11/21/2020 02:21 PM - nobu (Nobuyoshi Nakada)

[Bug #17021] Make host\_\* values consistent with target\_\*

Revision f03ba00f40e7c964efcfff7a761074800ecc1a4 - 02/11/2021 04:52 AM - nagachika (Tomoyuki Chikanaga)

merge revision(s) 43a9a974e276dc49b03ec81ccace0adb534a3d20: [Backport #17021] [Backport #17605]

```
[Bug #17021] Make host_* values consistent with target_*
```

```
---
configure.ac | 7 ++++++
1 file changed, 6 insertions(+), 1 deletion(-)
```

#### Revision f03ba00f40e7c964efcfff7a761074800ecc1a4 - 02/11/2021 04:52 AM - nagachika (Tomoyuki Chikanaga)

merge revision(s) 43a9a974e276dc49b03ec81ccace0adb534a3d20: [Backport #17021] [Backport #17605]

```
[Bug #17021] Make host_* values consistent with target_*
```

```
---
configure.ac | 7 ++++++
1 file changed, 6 insertions(+), 1 deletion(-)
```

#### Revision f03ba00f - 02/11/2021 04:52 AM - nagachika (Tomoyuki Chikanaga)

merge revision(s) 43a9a974e276dc49b03ec81ccace0adb534a3d20: [Backport #17021] [Backport #17605]

```
[Bug #17021] Make host_* values consistent with target_*
```

```
---
configure.ac | 7 ++++++
1 file changed, 6 insertions(+), 1 deletion(-)
```

## History

---

### #1 - 08/03/2020 07:56 PM - larskanis (Lars Kanis)

IMHO, "host\_cpu" should have "arm64". "arm" looks like a bug to me. Would be nice to get this resolved, since it blocks <https://github.com/ffi/ffi/pull/801>.

### #2 - 11/17/2020 10:20 AM - Eregon (Benoit Daloze)

This seems a clear bug, at least host\_cpu and build\_cpu.  
arm means 32-bit and is already used e.g. on Linux to mean that.

So it should be arm64 or aarch64.

target\_cpu is already arm64 interestingly.  
[@nobu \(Nobuyoshi Nakada\)](#) Do you know if we could fix that and how?

### #3 - 11/17/2020 12:35 PM - nobu (Nobuyoshi Nakada)

As I have no access to Apple silicon machines, can anyone share config.log file on that platform?

### #4 - 11/17/2020 12:45 PM - nobu (Nobuyoshi Nakada)

Maybe, uname -m (and tool/config.guess) returns "arm", then RUBY\_UNIVERSAL\_ARCH replaces target\_cpu only?

### #5 - 11/18/2020 01:14 AM - nobu (Nobuyoshi Nakada)

I heard that config.guess claims it "arm", while uname -m reports "arm64".

First of all, \$host\_cpu and others are used only for cross-compilers and nonsense in the other cases.  
Why do they matter?

### #6 - 11/18/2020 09:59 AM - nobu (Nobuyoshi Nakada)

- Related to Bug #3565: make test-all fails to run added

### #7 - 11/19/2020 06:51 PM - Eregon (Benoit Daloze)

nobu (Nobuyoshi Nakada) wrote in [#note-5](#):

First of all, \$host\_cpu and others are used only for cross-compilers and nonsense in the other cases.  
Why do they matter?

I think RbConfig host\_\* values should be correct no matter whether cross-compiling or not.

Notably, RbConfig::CONFIG["host\_os"] is well known as the portable way to get the OS.  
So it follows that RbConfig::CONFIG["host\_cpu"] would be the portable way to get the processor architecture.

Both are used here: <https://github.com/ffi/ffi/blob/fbe2cf851f426cc55b3b76eca7b10e37aa220b47/lib/ffi/platform.rb>

Should another RbConfig::CONFIG key be used? Which one?

**#8 - 11/21/2020 01:36 PM - nobu (Nobuyoshi Nakada)**

Eregon (Benoit Daloze) wrote in [#note-7](#):

Should another RbConfig::CONFIG key be used? Which one?

Usually we use target\_\* instead.

**#9 - 11/22/2020 12:10 AM - nobu (Nobuyoshi Nakada)**

- Status changed from Open to Closed

Applied in changeset [git|43a9a974e276dc49b03ec81ccace0adb534a3d20](https://github.com/ffi/ffi/commit/43a9a974e276dc49b03ec81ccace0adb534a3d20).

---

[Bug [#17021](#)] Make host\_\* values consistent with target\_\*

**#10 - 02/02/2021 03:20 PM - naruse (Yui NARUSE)**

- Related to Bug #17605: Please backport Apple Silicon arm64 vs arm bugfix to 2.6 and 2.7 added

**#11 - 04/05/2021 12:48 AM - nobu (Nobuyoshi Nakada)**

- Backport changed from 2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: UNKNOWN to 2.5: REQUIRED, 2.6: REQUIRED, 2.7: REQUIRED, 3.0: REQUIRED

**#12 - 05/22/2021 06:56 AM - nagachika (Tomoyuki Chikanaga)**

- Backport changed from 2.5: REQUIRED, 2.6: REQUIRED, 2.7: REQUIRED, 3.0: REQUIRED to 2.5: REQUIRED, 2.6: REQUIRED, 2.7: REQUIRED, 3.0: DONTNEED

43a9a974e276dc49b03ec81ccace0adb534a3d20 is included in ruby\_3\_0 branch.