

Ruby - Feature #21205

Make File::Stat#birthtime available on Linux

03/30/2025 07:27 AM - BertramScharpf (Bertram Scharpf)

Status:	Closed	
Priority:	Normal	
Assignee:		
Target version:		
Description		
Not that I would run into any problem with it, but this behaviour is confusing:		
<pre>RbConfig::CONFIG["platform"] #=> "amd64-freebsd14" (File.birthtime "/").class #=> Time (File.stat "/").birthtime.class #=> Time RbConfig::CONFIG["platform"] #=> "x86_64-linux" (File.birthtime "/").class #=> Time (File.stat "/").birthtime # raises NotImplementedError</pre>		

Associated revisions

Revision 18a036a6 - 05/30/2025 11:55 AM - nobu (Nobuyoshi Nakada)

[Feature #21205] Define File::Stat#birthtime by statx

Revision 8872d3e1 - 05/30/2025 11:55 AM - nobu (Nobuyoshi Nakada)

[Feature #21205] Fix up birthtime in ruby/spec

History

#1 - 03/30/2025 09:13 AM - byroot (Jean Boussier)

Contrary to FreeBSD, on Linux the birthtime isn't present in the struct returned by stat(2): <https://man7.org/linux/man-pages/man3/stat.3type.html> (see how there is no btime).

What File.birthtime does, it that it uses statx(2) <https://man7.org/linux/man-pages/man2/statx.2.html>

So the only way to fix the weirdness you point out, would be for File.stat to actually use statx(2) under the hood.

But it returns a lot more data, so there might be some performance considerations.

That being said, perhaps we should do it for correctness, because unless I'm mistaken, on Linux stat(2) return 32bit time, so it will wrap around in 2038. statx(2) returns 64-bit timestamps, so it seems that Linux want users to migrate to statx(2) eventually.

#2 - 03/31/2025 05:48 AM - BertramScharpf (Bertram Scharpf)

byroot (Jean Boussier) wrote in [#note-1](#):

Contrary to FreeBSD, on Linux the birthtime isn't present in the struct returned by stat(2): <https://man7.org/linux/man-pages/man3/stat.3type.html> (see how there is no btime).

I know. I did research about that but gave up.

This is how I solved my problem for now: <https://github.com/BertramScharpf/rbfind/commit/e6ed59668cb5707f4519272401113a8173f819af>.

#3 - 03/31/2025 08:25 AM - byroot (Jean Boussier)

- Tracker changed from Bug to Feature
- Subject changed from File::Stat#birthtime is available on Linux to Make File::Stat#birthtime available on Linux
- ruby -v deleted (ruby 3.3.7 (2025-01-15 revision be31f993d7) [x86_64-linux])
- Backport deleted (3.1: UNKNOWN, 3.2: UNKNOWN, 3.3: UNKNOWN, 3.4: UNKNOWN)

Switching this to a feature request.

#4 - 05/30/2025 01:00 PM - nobu (Nobuyoshi Nakada)

- *Status changed from Open to Closed*

Applied in changeset [git|18a036a6133bd141dfc25cd48ced9a2b78826af6](#).

[Feature [#21205](#)] Define File::Stat#birthtime by statx