

Railsの日付とか時刻オブジェクトたちはどこのタイムゾーンにいますでしょうか

tl;dr

**Railsでは
Time.zoneを
つかおう**

@zundan



@zundan



HEROKU

TTaaS

@heroku



Heroku ✓
@heroku

 Follow

@edmundleexz TaaS (Time Travel as a Service)

LIKE

1



7:21 PM - 11 Apr 2016



Edmund Li @edmundleexz · Apr 11
@heroku happy to be an early adopter ;D



Time Travel as a Service

@edmundleexz



Edmund Li
@edmundleexz

 Follow

Am I time traveling or is heroku just messing with me? [@heroku](#)

```
nonmethod:01: undefined method `today=' for Date:Class
from (irb):22
from /app/vendor/bundle/ruby/2.1.0/gems/railties-
from /app/vendor/bundle/ruby/2.1.0/gems/railties-
from /app/vendor/bundle/ruby/2.1.0/gems/railties-
from /app/bin/rails:4:in `require'
from /app/bin/rails:4:in `'
irb(main):023:0> Date.today == Date.tomorrow
=> true
irb(main):024:0> Date.today
=> Tue, 12 Apr 2016
irb(main):025:0> Date.yesterday
=> Sun, 10 Apr 2016
irb(main):026:0> █
```

mjd?

```
> Date.today == Date.tomorrow
```

```
=> true
```

```
> Date.today
```

```
=> 2016-04-12
```

```
> Date.yesterday
```

```
=> 2016-04-10
```

mjd!

```
$ irb -r date  
> Date.today.mjd  
=> 57489
```

修正ユリウス日

Modified Julian Date

再現してみよう

HerokuはUTC

```
$ heroku run date +%Z  
Running date +%Z ... up, run.1234  
UTC
```

RailsをPDTに

```
# config/application.rb
module RailsTimez
  class Application < Rails::Application
    ENV['TZ'] = 'UTC'
    config.time_zone = 'America/Los_Angeles'
  end
end
```

mjd!

```
> Date.today == Date.tomorrow
```

```
=> true
```

```
> Date.today
```

```
=> 2016-04-12
```

```
> Date.yesterday
```

```
=> 2016-04-10
```

Ruby vs Rails (irb)

```
$ bundle exec irb -r timecop
> Timecop.freeze(
  Time.new(2016, 4, 11, 18, 59, 0, "-07:00"))
=> 2016-04-12 01:59:00 +0000

> Date.today
=> <Date: 2016-04-11 (...)>
> Date.yesterday
# undefined method `yesterday' for Date:Class
> Date.tomorrow
# undefined method `tomorrow' for Date:Class
```


Ruby vs Rails (rails c)

```
$ bundle exec rails c
> Timecop.freeze(
  Time.new(2016, 4, 11, 18, 59, 0, "-07:00"))
=> 2016-04-12 01:59:00 +0000

> Date.today
=> Tue, 12 Apr 2016
> Date.yesterday
=> Sun, 10 Apr 2016
> Date.tomorrow
=> Tue, 12 Apr 2016
```

Ruby vs Rails

```
$ bundle exec irb -r timecop  
> Timecop.freeze(  
  Time.new(2016, 4, 11, 18, 59, 0, "-07:00"))  
=> 2016-04-12 01:59:00 +0000
```

4月12日 (UTC +00:00)

4月11日 (PDT -07:00)

Railsを知らない子はその設定を知らない

**Date.todayは
Ruby**

昨日と明日は
Rails

**qiita.com/
jnchito**

**「Railsなら
TimeWithZone
を使う」**

TimeWithZone

```
$ bundle exec rails c  
> Time.zone.today == Time.zone.tomorrow  
=> false  
> Time.zone.today  
=> Mon, 11 Apr 2016  
> Time.zone.yesterday  
=> Sun, 10 Apr 2016
```


TimeWithZone

```
$ bundle exec rails c  
> Time.now  
=> 2016-04-12 01:59:00 +0000  
> Time.zone.now  
=> Mon, 11 Apr 2016 18:59:00 PDT -07:00
```

4月12日 (UTC +00:00)

4月11日 (PDT -07:00)

ユーザー毎の
タイムゾーン
変換

※Pumaはマルチスレッド

タイムゾーン変換

```
Thread.new do
  ENV['TZ'] = tz
  time_str = time.strftime("%H:%M")
  :
end
```

タイムゾーン変換

```
$ bundle exec rake timezones:sys:travel
Traveling time ...!!!!
03:00 UTC became 22:00 in Japan (shuold be 12:00)
03:00 UTC became 03:00 in HST (shuold be 17:00)
03:00 UTC became 12:00 in EST (shuold be 22:00)
03:00 UTC became 17:00 in Japan (shuold be 12:00)
```

ENV['TZ']変
えるのはスレ
ッドセーフじ
ゃない

タイムゾーン変換

```
Thread.new do
  time_str = time_with_zone.\
    in_time_zone(tz).strftime("%H:%M")
  :
end
```

タイムゾーン変換

```
$ bundle exec rake timezones:rails:travel  
Traveling time ...  
completed time travel
```


in_time_zone

はスレッドセーフっぽい

どうやって？

どうやって？

```
$ grep tz Gemfile.lock  
  tzinfo (~> 1.1)  
  tzinfo (1.2.2)
```

**github/
tzinfo/tzinfo**

Ruby Timezone Library

メンテナンス
大変じゃね？

**"search for
a zoneinfo
directory"**

Zoneinfo directory

```
> require 'tzone/data'  
# LoadError: cannot load such file -- tzone/data  
> TZInfo::ZoneinfoDataSource::DEFAULT_SEARCH_PATH  
=> ["/usr/share/zoneinfo",  
    "/usr/share/lib/zoneinfo",  
    "/etc/zoneinfo"]
```


Zoneinfo directory

```
$ ls /usr/share/zoneinfo/
+VERSION      Cuba          GMT-0         MET           ROK
Africa/       EET           GMT0          MST           Singapore
America/      EST           Greenwich    MST7MDT       Turkey
Antarctica/   EST5EDT      HST           Mexico/       UCT
Arctic/       Egypt        Hongkong     NZ            US/
Asia/         Eire         Iceland      NZ-CHAT       UTC
Atlantic/     Etc/         Indian/      Navajo        Universal
Australia/    Europe/      Iran         PRC           W-SU
Brazil/       Factory      Israel       PST8PDT       WET
CET           GB           Jamaica      Pacific/      Zulu
CST6CDT      GB-Eire     Japan        Poland         iso3166.tab
Canada/      GMT         Kwajalein   Portugal      posixrules
Chile/       GMT+0       Libya       ROC           zone.tab
```

よくできて
た！

よくできてた！

```
$ bundle exec rake tzinfo:patch
:
TZInfo::TimezoneOffset.new
  @abbreviation = KST
  @std_offset = 0
  @utc_offset = 32400
  @utc_total_offset = 32400
TZInfo::TimezoneOffset#to_local(2015-08-15 00:00:00 UTC)
2015-08-15 08:30:00 +0830
```

ちなみに

**github/
tzinfo/
tzinfo-data**

Timezone Data for TZInfo

あればこっち
を使う

github/tzinfo/tzinfo-data

nc. (US) | <https://github.com/tzinfo/tzinfo-data/commit/8fa8ddaf932d1023bbd77427f348b5ce8dfd84c2>



tzinfo / tzinfo-data

<> Code

Issues 0

Pull requests 0

Pulse

Graphs

Update to tzdata version 2016d.

<https://mm.icann.org/pipermail/tz-announce/2016-April/000038.html>

master v1.2016.4

 philr committed 26 days ago

1 parent [8752eb3](#)

Showing **45 changed files** with **763 additions** and **336 deletions**.

45  data/NEWS

... .. @@ -1,5 +1,40 @@

1 1 News for the tz database

2 2

ちゃんとメン
テナンスされ
てる！

あ、そういえ
ば

Heroku Postgres

Heroku Postgres

```
$ heroku pg:psql
---> Connecting to DATABASE_URL
:
app-name:DATABASE=> SELECT current_date, current_time;
   date      |          timetz
-----+-----
 2016-05-12 | 03:05:14.943494+00
(1 row)
```

UTCで待ってます。

とこゝろで

サポート

「昨日の夜アプリが遅かったんだけど」

どこのタイム
ゾーンで昨日
よー

そもそもそもそも 今
何日よー

時刻には日付
とタイムゾーン
もよるしく

タイムゾーン
重要

URLs

@heroku/
status/719712029343395841

@edmundleexz/
status/719706359759917056

github.com/zunda/rails-timez

qiita.com/jnchito/items/
cae89ee43c30f5d6fa2c

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TokyuRubykaigi10 #tqrk10 on
2016-05-29

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