# Improve performance of `Base64.urlsafe_encode64`

08/18/2017 10:59 AM - Soilent (Konstantin x)

<table>
<thead>
<tr>
<th>Status</th>
<th>Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority</td>
<td>Normal</td>
</tr>
<tr>
<td>Assignee</td>
<td></td>
</tr>
<tr>
<td>Target version</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

Improve performance of `Base64.urlsafe_encode64` by avoiding unnecessary memory allocations. This may seem insignificant, but for the web service I am working on this patch makes noticeable improvement.

**Benchmark**

```ruby
require 'benchmark/ips'
require 'base64'
require 'securerandom'

Benchmark.ips do |x|
  string = SecureRandom.bytes(128)
  x.report 'Base64.urlsafe_encode64' do |t|
    t.times { Base64.urlsafe_encode64(string) }
  end
end
```

**Before**

```
Base64.urlsafe_encode64

559.355k (± 3.2%) i/s - 2.805M in 5.019239s
```

**After**

```
Base64.urlsafe_encode64

736.211k (± 2.5%) i/s - 3.721M in 5.057606s
```

**Patch**

[https://github.com/ruby/ruby/pull/1676](https://github.com/ruby/ruby/pull/1676)

**History**

**#1 - 07/26/2019 09:33 PM - jeremyevans0 (Jeremy Evans)**
- Backport deleted (2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: UNKNOWN)
- Tracker changed from Bug to Feature

**#2 - 12/10/2019 05:34 AM - mame (Yusuke Endoh)**
- Status changed from Open to Closed

Merged at 1bdabaa6b13344c195698ca5b0ced323cb93e2e1. Thank you for the contribution.