
onetimepass Documentation

Release 0.3.0

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Versions

Current development release: [onetimepass-master.tar.gz](#)

1.1 Changelog

Version	Date	Changes
1.0.1	2015-07-31	<ul style="list-style-type: none">• fixed tests and build system,• extended test coverage with Py3.5, PyPy and PyPy3,
1.0.0	2015-07-31	<ul style="list-style-type: none">• skipping spaces if they are given in secret,• test suite made more reliable,
0.3.0	2014-08-16	<ul style="list-style-type: none">• configurable digest method,• configurable token length,• configurable TOTP interval length,
0.2.2	2013-07-12	<ul style="list-style-type: none">• license clarification,• removal of compiled documentation from the sources,
0.2.1	2013-07-12	<ul style="list-style-type: none">• support for unicode secrets,• preliminary support for Travis CI,
0.2.0	2013-04-11	<ul style="list-style-type: none">• added compatibility with Python 3.x,• removed compatibility with Python 2.5 and earlier,
0.1.2	2013-01-23	<ul style="list-style-type: none">• added automated case fold to secret,
0.1.1	2013-12-20	<ul style="list-style-type: none">• internal code improvements,• documentation,
0.1.0	2011-12-19	(initial public release)

What is OneTimePass

OneTimePass (actually `onetimepass`) is a module for generating one-time passwords, namely HOTPs (HMAC-based one-time passwords) and TOTP (time-based one-time passwords). They are used eg. within Google Authenticator application for Android or iPhone.

How to install

To install the library, you can either use `pip`, or just download it separately. Installing in `pip` is the simplest. Assuming you are installing it system-wide:

```
$ sudo pip install onetimepass
```

(if you are installing it in `virtualenv`, you do not need “`sudo`” part).

Alternatively, you can follow the download link above and unpack in some directory on your `sys.path`, or clone it as Git submodule to your own directory.

How to use OneTimePass

You can use this module in the following way:

1. Install module (download it into your application's directory or into modules directory)
2. To get time-based token you invoke it like that:

```
import onetimepass as otp
my_secret = 'MFRGGZDFMZWQ2LK'
my_token = otp.get_totp(my_secret)
```

Note: my_secret is case-insensitive, also spaces are ignored. This means you can provide your users with more readable representations of the secrets (eg. mfrg gzdf mztw q2lk instead of MFRGGZDFMZWQ2LK) and pass them unchanged to library. Same applies to other functions accepting secrets in this library.

3. To get HMAC-based token you invoke it like that:

```
import onetimepass as otp
my_secret = 'MFRGGZDFMZWQ2LK'
my_token = otp.get_hotp(my_secret, intervals_no=3)
```

where intervals_no is the number of the current trial (if checking on the server, you have to check several values, higher than the last successful one, determined for previous successful authentications).

4. To check time-based token you invoke it like that:

```
import onetimepass as otp
my_secret = 'MFRGGZDFMZWQ2LK'
my_token = 123456 # should be probably from some user's input
is_valid = otp.valid_totp(token=my_token, secret=my_secret)
```

5. To check HMAC-based token you invoke it like that:

```
import onetimepass as otp
my_secret = 'MFRGGZDFMZWQ2LK'
my_token = 123456 # should be probably from some user's input
last_used = 5 # store last valid interval somewhere else
is_valid = otp.valid_hotp(token=my_token, secret=my_secret, last=last_used)
```

where:

- last argument (in this case being assigned last_used) is the number of the last successfully checked interval number (as valid_totp() will skip it and start checking from the next interval number)
- is_valid is being assigned value of False if my_token has not been identified as valid OTP for given secret (my_secret) and checked interval range. If it has been successful, is_valid is assigned

a number of the working interval number (it should be saved into the database and supplied to the function as `last` argument next time the password is being checked, so you cannot use the same token again).

License

License for this library is available in `LICENSE.rst` file, in the same directory. Online version is available [here](#).

Indices and tables

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