
flask-sso Documentation

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1	Contents	3
1.1	Installation	3
1.2	Quickstart	4
1.3	Configuration	4
1.4	API	5
1.5	Changelog	6
1.6	Contributing	7
1.7	License	7
1.8	Authors	8
	Python Module Index	9

Flask-SSO is a Flask extension permitting to set up Shibboleth Single-Sign-On authentication in Flask based web applications.

Contents

- *Installation*
 - *Requirements*
- *Quickstart*
 - *A Minimal Example*
- *Configuration*
 - *SSO_ATTRIBUTE_MAP*
 - *SSO_LOGIN_URL*
 - *SSO_LOGIN_ENDPOINT*
- *API*
 - *Flask-SSO*
- *Changelog*
- *Contributing*
- *License*
- *Authors*
 - *Contributors*

1.1 Installation

Flask-SSO is on PyPI so all you need is :

```
$ pip install flask-sso
```

The development version can be downloaded from [its page at GitHub](#).

```
$ git clone https://github.com/inveniosoftware/flask-sso.git
$ cd flask-sso
$ pip install -e .
$ ./run-tests.sh
```

1.1.1 Requirements

Flask-SSO has the following dependencies:

- [Flask](#)
- [blinker](#)

Flask-SSO requires Python version 2.7 or 3.3+.

1.2 Quickstart

This part of the documentation will show you how to get started in using Flask-SSO with Flask.

This guide assumes you have successfully installed Flask-SSO and a working understanding of Flask. If not, follow the installation steps and read about Flask at <http://flask.pocoo.org/docs/>.

1.2.1 A Minimal Example

A minimal Flask-SSO usage example looks like this.

First, let's create the application and initialise the extension:

```
from flask import Flask, session, redirect
from flask_sso import SSO
app = Flask('myapp')
ext = SSO(app=app)
```

Second, let's configure the attribute map for converting environment variables to a dictionary containing user information:

```
#: Default attribute map
SSO_ATTRIBUTE_MAP = {
    'ADFS_AUTHLEVEL': (False, 'authlevel'),
    'ADFS_GROUP': (True, 'group'),
    'ADFS_LOGIN': (True, 'nickname'),
    'ADFS_ROLE': (False, 'role'),
    'ADFS_EMAIL': (True, 'email'),
    'ADFS_IDENTITYCLASS': (False, 'external'),
    'HTTP_SHIB_AUTHENTICATION_METHOD': (False, 'authmethod'),
}

app.config['SSO_ATTRIBUTE_MAP'] = SSO_ATTRIBUTE_MAP
```

Third, let's set up a login handler function that reads user information and stores it for later usage:

```
@sso.login_handler
def login_callback(user_info):
    """Store information in session."""
    session['user'] = user_info
```

Fourth, we can now greet the user using his SSO login name:

```
@app.route('/')
def index():
    """Display user information or force login."""
    if 'user' in session:
        return 'Welcome {name}'.format(name=session['user']['nickname'])
    return redirect(app.config['SSO_LOGIN_URL'])
```

1.3 Configuration

The details of the application settings that can be customized.

1.3.1 SSO_ATTRIBUTE_MAP

A dictionary mapping HTTP headers to a tuple. The tuple contains whether the attribute is required and then the name of the attribute.

Example:

```
# CERN Single-Sign-On
SSO_ATTRIBUTE_MAP = {
    "ADFS_LOGIN": (True, nickname),
    "ADFS_EMAIL": (True, email),
}

# General Shibboleth
SSO_ATTRIBUTE_MAP = {
    "HTTP_SHIB_IDENTITY_PROVIDER": (True, "idp"),
    "HTTP_SHIB_SHARED_TOKEN": (True, "shared_token"),
    "HTTP_SHIB_CN": (True, "cn"),
    "HTTP_SHIB_MAIL": (True, "email"),
    "HTTP_SHIB_GIVENNAME": (False, "first_name"),
    "HTTP_SHIB_SN": (False, "last_name"),
}
```

1.3.2 SSO_LOGIN_URL

Url of login handler. Default: */login/sso*.

1.3.3 SSO_LOGIN_ENDPOINT

Name of login handler endpoint to be used in *url_for* function.

Example:

```
>>> from flask.ext.sso.config import *
>>> url_for(SSO_LOGIN_ENDPOINT)
/login/sso
>>> SSO_LOGIN_URL
/login/sso
```

Default: *sso_login*.

1.4 API

This documentation section is automatically generated from Flask-SSO's source code.

1.4.1 Flask-SSO

Implement Shibboleth Single-Sign-On authentication.

Flask-SSO is initialized like this:

Initialization of the extension:

```
>>> from flask import Flask
>>> from flask_ssso import SSO
>>> app = Flask('myapp')
>>> ext = SSO(app=app)
```

or alternatively using the factory pattern:

```
>>> app = Flask('myapp')
>>> ext = SSO()
>>> ext.init_app(app)
```

class flask_ssso.SSO(*app=None*)

Flask extension implementation.

Initialize login callback.

init_app(*app*)

Initialize a Flask application.

login()

Implement application login endpoint for SSO.

login_error_handler(*callback*)

Set the error callback for *login* method.

It takes one argument with attributes map, and should return a Flask response.

Parameters *callback* – The callback for login error.

login_handler(*callback*)

Set the callback for the *login* method.

It takes one argument with attributes map, and should return a Flask response.

Parameters *callback* – The callback for login.

parse_attributes()

Parse arguments from environment variables.

1.5 Changelog

Here you can see the full list of changes between each Flask-SSO release.

Version 0.4.0 (released 2015-10-05)

- Login error handler can be added to SSO and will be called with required attributes are missing. If login error callback is set no *SSOAttributeError* will be raised and application can return custom error response based on missing attributes.

Version 0.3.0 (released 2015-07-30)

- The Flask-SSO extension is now released under more permissive Revised BSD License. (#6)
- For testing execute run-tests.sh instead of sourcing it. (#4)
- New minimal application example. (#8)
- New Tox support for Python-3.4. (#4)

Version 0.2.0 (released 2014-06-26)

- Allowing ‘;’ separator in HTTP data.

- Fix for dictionary key order in tests.
- Fix for Python 3.3 string comparison.
- New dependency: Blinker.
- Code coverage improved to 100%.
- New configuration option SSO_LOGIN_ENDPOINT.

Version 0.1

- Initial public release.

1.6 Contributing

Bug reports, feature requests, and other contributions are welcome. If you find a demonstrable problem that is caused by the code of this library, please:

1. Search for [already reported problems](#).
2. Check if the issue has been fixed or is still reproducible on the latest *master* branch.
3. Create an issue with **a test case**.

If you create a feature branch, you can run the tests to ensure everything is operating correctly:

```
$ ./run-tests.sh
...
Ran 8 tests in 0.246s

OK
Name                               Stmts   Miss  Cover   Missing
-----
flask_sso/__init__                 47      0   100%
flask_sso/config                   4      0   100%
flask_sso/version                   2      0   100%
-----
TOTAL                             53      0   100%
```

1.7 License

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1.8 Authors

Flask-SSO is developed for use in [Invenio](#) digital library software.

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f

`flask_sso`, 5
`flask_sso.config`, 4

F

`flask_sso` (module), [5](#)

`flask_sso.config` (module), [4](#)

I

`init_app()` (`flask_sso.SSO` method), [6](#)

L

`login()` (`flask_sso.SSO` method), [6](#)

`login_error_handler()` (`flask_sso.SSO` method), [6](#)

`login_handler()` (`flask_sso.SSO` method), [6](#)

P

`parse_attributes()` (`flask_sso.SSO` method), [6](#)

S

`SSO` (class in `flask_sso`), [6](#)