oemof.db Documentation

Release 0.0.6

oemof developer group

Dec 05, 2019

Contents

Contents:

1.1 Getting started

1.1.1 Overview

Open Energy Modelling Framework - An extension for all database related things

See the documentation for more information!

Installation

```
pip install oemof.db
```

You can also install the in-development version with:

```
pip install https://github.com/oemof/oemof.db/archive/master.zip
```

Unfortunately installing the PyPi package doesn't work until #28 is fixed. Instead, you have to install via:

```
pip install -e git://github.com/oemof/oemof.db.git@master#egg=oemof.db
```

Note that you have to have *git* installed for this to work.

If you want to have the developer version clone the repository by

```
git clone git@github.com:oemof/oemof.db.git
```

and you can install it using pip3 with the -e flag.

```
sudo pip3 install -e <path/to/the/oemof.db/repository/root/directory>
```

Keep virtualenvs in mind!

Configuration and usage

As the purpose of this package is to facilitate usage of the `oemof` database, it needs to know how to connect to this database. Being part of `oemof`, as fallback `oemof.db` always looks for this configuration in the file `config.ini` in a directory called `.oemof` in your home directory.

A particular config-file can either specified and accessed via

```python
from oemof.db import cfg

# only load config file
cfg.load_config(config_file=<you-config-file>)

# access config parameters
cfg.get(<section>, <parameter>)
```

If you're interested in establishing a database connection and specify config file connection parameters are stored in use

```python
from oemof.db import cfg

# establish database connection with specified section and config_file
db.connection(section=<section>, config_file=<you-config-file>)
```

To configure database access this file has to have at least one dedicated section containing the necessary options, like this:

```
[postGIS]
username = username under which to connect to the database
database = name of the database from which to read
host     = host to connect to
port     = port to connect to
pw       = password used to connect with the given username (OPTIONAL)
```

The section is assumed to be named `postGIS` by default, but you can name it differently and have multiple sections for different databases if the need arises.

The password is optional. If you don't want to store the password in the `config.ini`, you may store it using the keyring package, which is a dependency of `oemof.db`, like this:

```python
>>> import keyring
>>> keyring.set_password("database", "username")
```

where `"database"` and `"username"` have the same values as the corresponding options in `config.ini`.

Development

To run the all tests run:

```
tox
```

Note, to combine the coverage data from all the tox environments run:

Windows	
	```set PYTEST_ADDOPTS=--cov-append``` ```tox```
Other	
	```PYTEST_ADDOPTS=--cov-append tox```

1.2 oemof

1.2.1 oemof package

Subpackages

oemof.db package

Submodules

oemof.db.coastdat module

oemof.db.config module

oemof.db.feedin_pg module

oemof.db.powerplants module

oemof.db.test_config_changes module

oemof.db.tools module

Module contents

Module contents

1.3 Contributing

Contributions are welcome, and they are greatly appreciated! Every little bit helps, and credit will always be given.

1.3.1 Bug reports

When reporting a bug please include:

- Your operating system name and version.
- Any details about your local setup that might be helpful in troubleshooting.

  • Detailed steps to reproduce the bug.

1.3.2 Documentation improvements

oemof.db could always use more documentation, whether as part of the official oemof.db docs, in docstrings, or even on the web in blog posts, articles, and such.

1.3.3 Feature requests and feedback

The best way to send feedback is to file an issue at https://github.com/oemof/oemof.db/issues.

If you are proposing a feature:

  • Explain in detail how it would work.

  • Keep the scope as narrow as possible, to make it easier to implement.

  • Remember that this is a volunteer-driven project, and that code contributions are welcome :)

1.3.4 Development

To set up *oemof.db* for local development:

1. Fork oemof.db (look for the "Fork" button).

2. Clone your fork locally:

```
git clone git@github.com:oemof/oemof.db.git
```

3. Create a branch for local development:

```
git checkout -b name-of-your-bugfix-or-feature
```

   Now you can make your changes locally.

4. When you're done making changes run all the checks and docs builder with tox one command:

```
tox
```

5. Commit your changes and push your branch to GitHub:

```
git add .
git commit -m "Your detailed description of your changes."
git push origin name-of-your-bugfix-or-feature
```

6. Submit a pull request through the GitHub website.

Pull Request Guidelines

If you need some code review or feedback while you're developing the code just make the pull request.

For merging, you should:

1. Include passing tests (run `tox`)[1].

---

[1] If you don't have all the necessary python versions available locally you can rely on Travis - it will run the tests for each change you add in the pull request.
It will be slower though . . .

2. Update documentation when there's new API, functionality etc.

3. Add a note to `CHANGELOG.rst` about the changes.

4. Add yourself to `AUTHORS.rst`.

Tips

To run a subset of tests:

```
tox -e envname -- pytest -k test_myfeature
```

To run all the test environments in *parallel* (you need to `pip install detox`):

```
detox
```

1.4 Authors

- Guido Pleßmann
- Stephan Günther
- Uwe Krien

1.5 What's New

These are new features and improvements of note in each release

> *Releases*
>
> - *v0.0.6 (2019-12-03)*
> - *v0.0.5 (March 20th, 2017)*
> - *v0.0.4 (December 16, 2016)*
> - *v0.0.3 (March 10, 2016)*
> - *v0.0.2 (January 29, 2016)*
> - *v0.0.1 (October 30, 2015)*

1.5.1 v0.0.6 (2019-12-03)

Testing

- Testing is now done via **:code:'pytest'_** instead of `nose`.

Bug fixes

- This release should finally get rid of issue #28.

Other changes

- Switched to a *src* based repository layout. This is done via a special packaging template helping with a lot of stuff. Most importantly it helps with correct test isolation so that issue #28 can properly be tested against.

Contributors

- Stephan Günther

1.5.2 v0.0.5 (March 20th, 2017)

Bug fixes

- In order to play well with *oemof*, *oemof/db/__init__.py* has been removed. This should fix *oemof*'s issue #269.

Contributors

- Stephan Günther

1.5.3 v0.0.4 (December 16, 2016)

New features

- Create an empty database table with primary key type serial in *tools.py*
- Access grant to users/ group of users, see *grant_db_access* in *tools.py*
- Additional optional keyword argument to specify config file (issue #21)
- Ask for password and save store in keyring if not existent (issue #22)

Documentation

Testing

Bug fixes

- Add missing keyrings.alt dependency

Other changes

Contributors

- Guido Pleßmann
- Uwe Krien

1.5.4 v0.0.3 (March 10, 2016)

New features

- It's now possible to have multiple sections for different databases in `config.ini` (PR #7)

Documentation

- The documentation was erroneously talking about `feedinlib` in places where it should have said `oemof.db`. (issue #3)

Contributors

- Uwe Krien
- Stephan Günther
- Guido Pleßmann

1.5.5 v0.0.2 (January 29, 2016)

Other changes

- Package is now called `oemof.db`

Contributors

- Uwe Krien
- Stephan Günther

1.5.6 v0.0.1 (October 30, 2015)

New features

Documentation

Testing

Bug fixes

Other changes

Contributors

- Uwe Krien

CHAPTER 2

Indices and tables

- genindex
- modindex
- search