

KinetEco Research Service Installation

Overview

1. Dependencies
2. Repository setup
3. Testing

Dependencies

Mac OSX

1. Install Homebrew.

```
/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

2. Install PostgreSQL and create a database.

```
brew update
brew install postgresql
createdb kineteco
```

Verify the database has been created by running:

```
psql -d kineteco
\l
\q
```

3. Install pyenv and pyenv-virtualenv.

a) Installation

```
brew install pyenv
brew install pyenv-virtualenv
```

b) Add the following to your shell's profile:

```
eval "$(pyenv init -)"
eval "$(pyenv virtualenv-init -)"
PATH=~/.pyenv:$PATH
```

c) Install the specific version of Python the application uses:

```
pyenv install 3.7.0
```

Linux Ubuntu

1. Install PostgreSQL and create a database.

```
sudo apt-get update
sudo apt-get install postgresql postgresql-contrib
createdb kineteco
```

Verify the database has been created by running:

```
psql -d kineteco
\l
\q
```

If you have problems with roles or permissions, check out this resource: <https://www.digitalocean.com/community/tutorials/how-to-install-and-use-postgresql-on-ubuntu-16-04>

2. Install pyenv and pyenv-virtualenv.

```
sudo apt-get install git python-pip make build-essential libssl-dev zlib1g-dev li-
bz2-dev libreadline-dev libsqlite3-dev curl
```

```
git clone https://github.com/yyuu/pyenv.git ~/.pyenv
```

```
git clone https://github.com/pyenv/pyenv-virtualenv.git ~/.pyenv/plugins/pyenv-virtualenv
```

```
eval "$(pyenv init -)"
eval "$(pyenv virtualenv-init -)"
PATH=$HOME/.pyenv:$PATH
exec $SHELL
```

3. Install the specific version of Python the application uses:

```
pyenv install 3.7.0
```

Repository Setup

1. Create a virtual environment.

```
cd /path/to/research-kineteco
pyenv virtualenv 3.7.0 kineteco
pyenv activate kineteco
```

2. Set up the repo's dependencies.

```
pip install -r requirements.txt
```

3. Export necessary environment variables.

```
export FLASK_APP=kineteco.py
export APP_SETTINGS=local
export KINETECO_DATABASE_URL="postgresql://localhost/kineteco"
export FLASK_ENV=development
```

4. Instantiate necessary database tables:

```
python manage.py db init
python manage.py db migrate
python manage.py db upgrade
```

5. Test table creation.

```
psql -d kineteco
\dt
```

6. Seed the database.

- Open the flask shell.

```
flask shell
```

- Copy/paste the contents of scripts/seed_db.py into the shell and hit Enter.

Testing

1. Start the service.

```
flask run
```

2. Test the status endpoint by running the following in terminal:

```
curl -X GET "http://localhost:5000/monitoring/status" -H "accept: application/json"
```

3. Test the panel efficiency endpoint by running the following in terminal:

```
curl -X GET "http://localhost:5000/solar/panel_efficiency?voltage=50&name=fake&current=1" -H "accept: application/json"
```

Or use Postman.