MyEMS

MyEMS Team

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INTRODUCTION

MyEMS is an industry leading open source Energy Management System that is built on cloud computing, IOT, Big Data and AI technologies. MyEMS can be used for a standard and powerful integrated energy management service platform. MyEMS is being developed and maintained by an experienced development team, and the system's source code is published under MIT license.

1.1 Target audience

1.2 Reasons to use MyEMS

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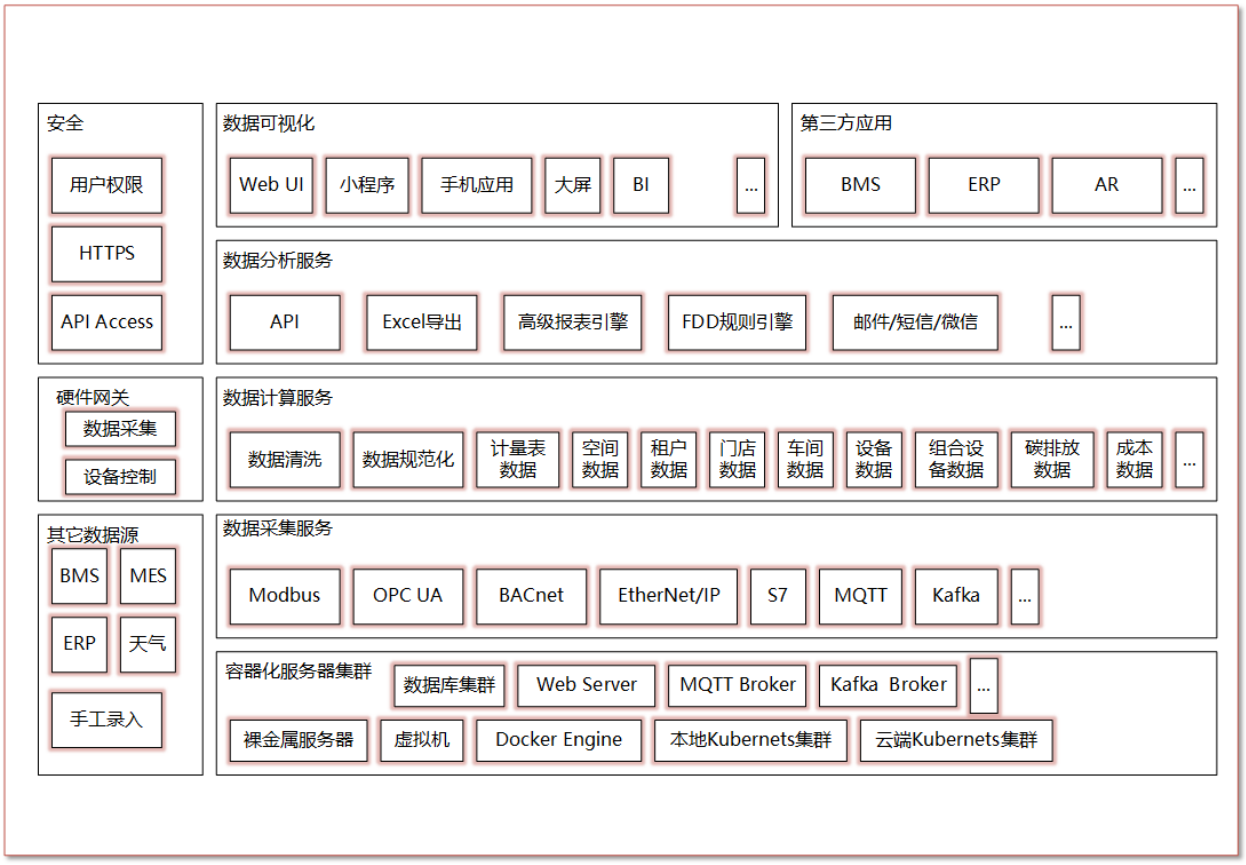
ARCHITECTURE

images/architecture-site-view.png



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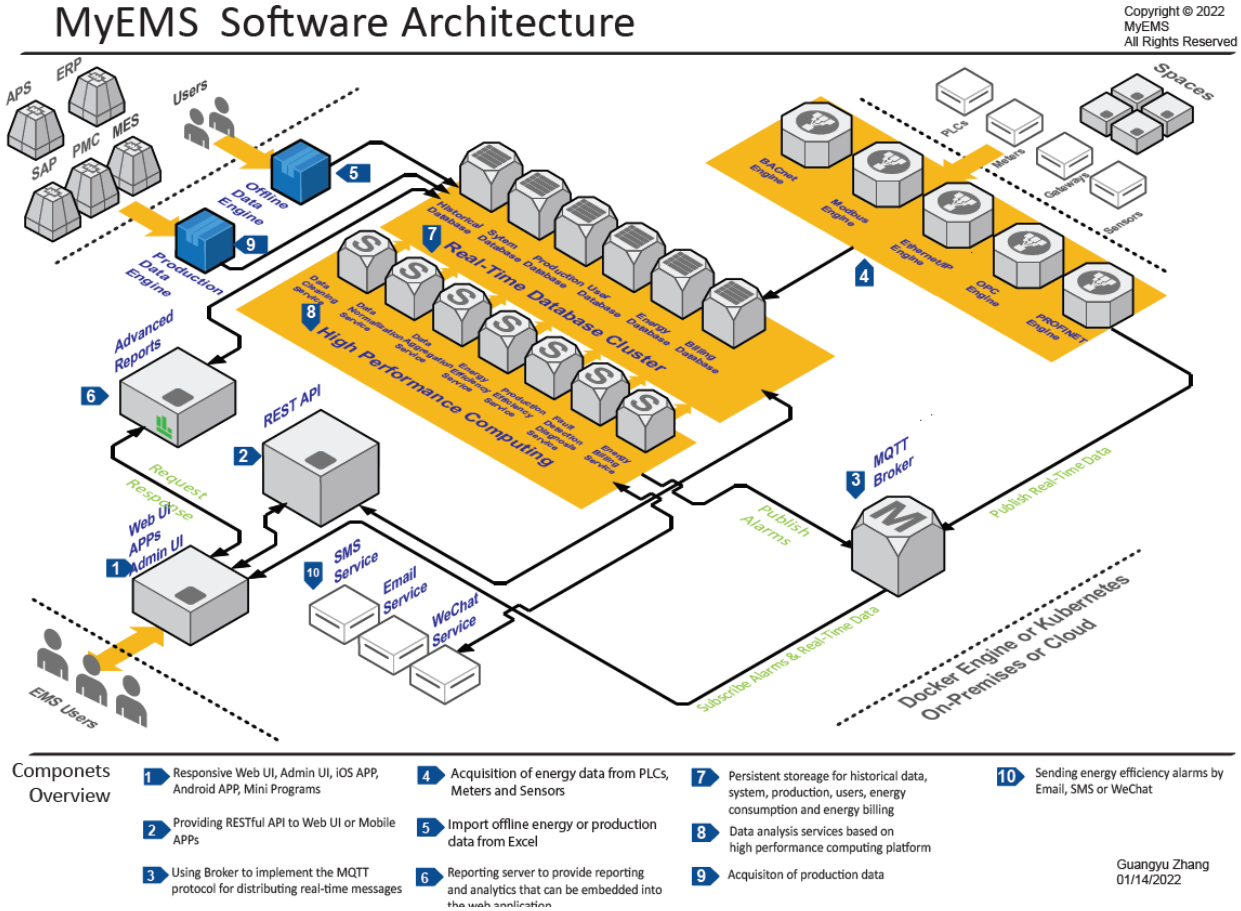
COMPONENTS



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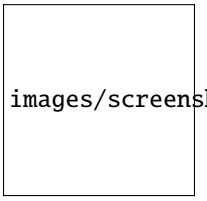
SCREEN SHOOTS



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COMPARE EDITIONS

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DOWNLOAD

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INSTALLATION

7.1 MyEMS API Service

7.1.1 Introduction

Providing REST API service for MyEMS Web APP, Android APP and iOS APPand/or third parties

7.1.2 Prerequisites

anytree
simplejson
mysql.connector
falcon
falcon_cors
gunicorn
openpyxl

7.1.3 Installation

- Install anytree:

```
$ cd ~/tools
$ git clone https://github.com/c0fec0de/anytree.git
$ cd anytree
$ sudo python3 setup.py install
```

- Install simplejson:

```
$ cd ~/tools
$ git clone https://github.com/simplejson/simplejson.git
$ cd simplejson
$ sudo python3 setup.py install
```

- Install MySQL Connector:

```
$ cd ~/tools
$ wget wget https://cdn.mysql.com//Downloads/Connector-Python/mysql-connector-
↪python-8.0.28.tar.gz
```

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```
$ tar xzf mysql-connector-python-8.0.28.tar.gz
$ cd ~/tools/mysql-connector-python-8.0.28
$ sudo python3 setup.py install
```

- Install Falcon

  if you are behind proxy, use –proxy parameter
  Refer to
  https://falconframework.org/
  https://github.com/lwcolton/falcon-cors
  https://github.com/yohanboniface/falcon-multipart

```
$ mkdir ~/tools/falcon && cd ~/tools/falcon
$ pip3 download cython falcon falcon-cors falcon-multipart
$ export LC_ALL="en_US.UTF-8"
$ export LC_CTYPE="en_US.UTF-8"
$ sudo dpkg-reconfigure locales
$ sudo pip3 install --upgrade --no-index --find-links ~/tools/falcon cython falcon␣
↪falcon-cors falcon-multipart
```

- Install gunicorn, refer to http://gunicorn.org:

```
$ mkdir ~/tools/gunicorn && cd ~/tools/gunicorn
$ pip3 download gunicorn
$ sudo pip3 install --no-index --find-links ~/tools/gunicorn gunicorn
```

- Install openpyxl, refer to https://foss.heptapod.net/openpyxl/openpyxl

  Get the latest version of et_xmlfile from https://foss.heptapod.net/openpyxl/et_xmlfile/
  Get the latest version of jdcal from https://github.com/phn/jdcal
  Get the latest version of openpyxl from https://foss.heptapod.net/openpyxl/openpyxl

```
$ cd ~/tools
$ wget https://foss.heptapod.net/openpyxl/et_xmlfile/-/archive/1.1/et_xmlfile-1.1.
↪tar.gz
$ tar xzf et_xmlfile-1.1.tar.gz
$ cd ~/tools/et_xmlfile-1.1
$ sudo python3 setup.py install
$ cd ~/tools
$ git clone https://github.com/phn/jdcal.git
$ cd ~/tools/jdcal
$ sudo python3 setup.py install
$ mkdir ~/tools/pillow && cd ~/tools/pillow
$ pip3 download Pillow
$ sudo pip3 install --no-index --find-links ~/tools/pillow Pillow
$ cd ~/tools
$ wget https://foss.heptapod.net/openpyxl/openpyxl/-/archive/3.0.7/openpyxl-3.0.7.
↪tar.gz
```

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```
$ tar xzf openpyxl-3.0.7.tar.gz
$ cd openpyxl-3.0.7
$ sudo python3 setup.py install
```

- Install gunicorn service for myems-api:

```
$ cd ~/myems-api
$ sudo cp -R ~/myems-api /myems-api
```

Check and change the config file if necessary:

```
$ sudo nano /myems-api/config.py
```

Change the listening port (8000 as an example) in gunicorn.socket:

```
$ sudo nano /myems-api/gunicorn.socket
ListenStream=0.0.0.0:8000
$ sudo ufw allow 8000
```

Setup systemd configure files:

```
$ sudo cp /myems-api/gunicorn.service /lib/systemd/system/
$ sudo cp /myems-api/gunicorn.socket /lib/systemd/system/
$ sudo cp /myems-api/gunicorn.conf /usr/lib/tmpfiles.d/
```

Next enable the services so they autostart at boot:

```
$ sudo systemctl enable gunicorn.socket
$ sudo systemctl enable gunicorn.service
```

Start the services:

```
$ sudo systemctl start gunicorn.socket
$ sudo systemctl start gunicorn.service
```

Run for debugging and testing:

```
$ cd myems-api
$ sudo gunicorn -b 127.0.0.1:8000 app:api
```

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ADMINISTRATOR GUIDE

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USER GUIDE

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DEVELOPER GUIDE