

OpenLEADR

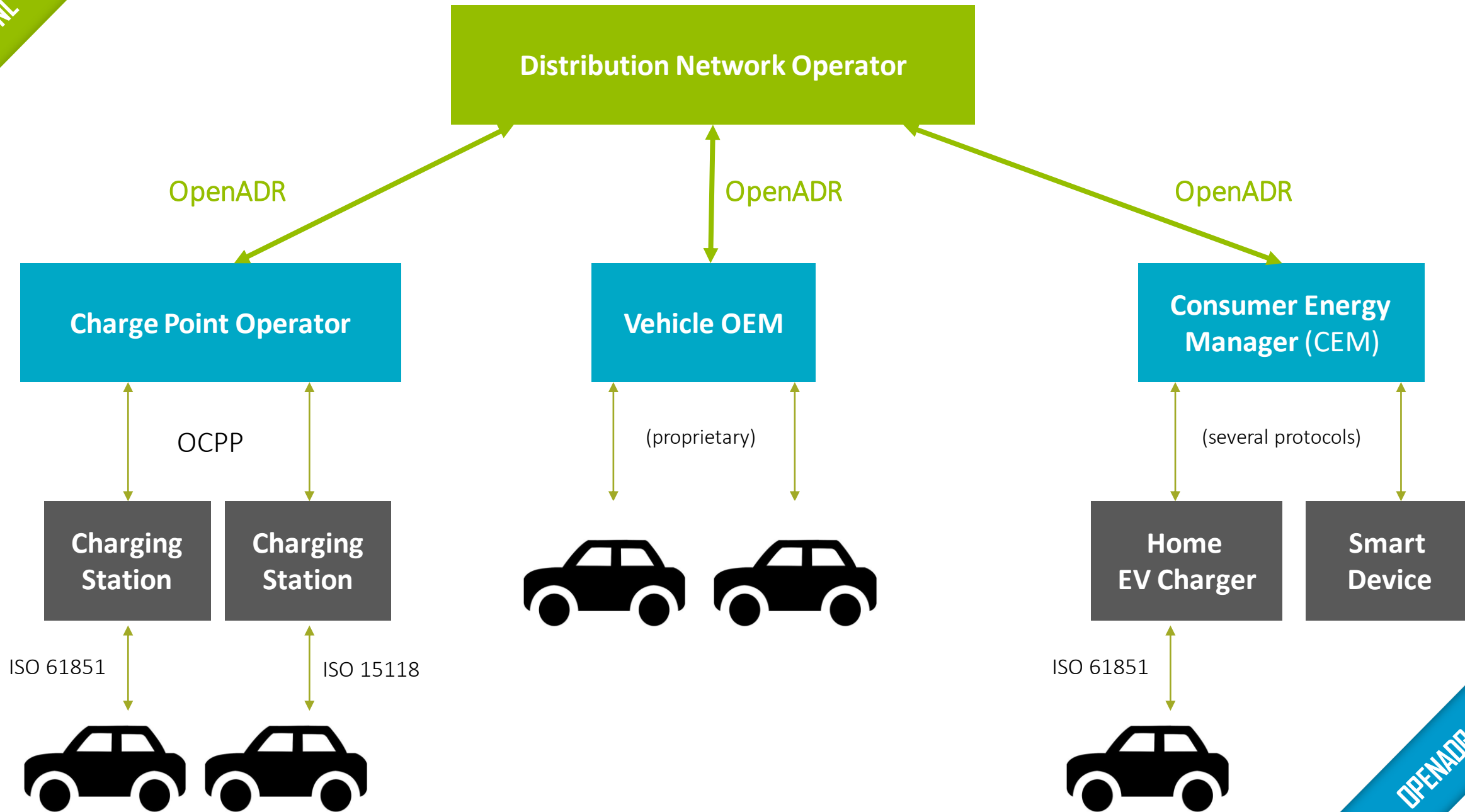
An open source implementation of OpenADR in Python

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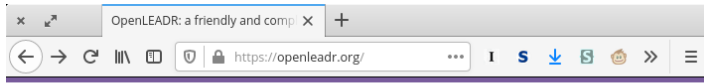
ElaadNL Foundation

- Founded in 2009 by the major Dutch Distribution System Operators
- Rolled out the world's first public charging network
- Invented the Open Charge Point Protocol, OCPP
- Continues to develop Smart Charging in different projects



OLF ENERGY





openLEADR

A friendly and compliant OpenADR implementation for Python.

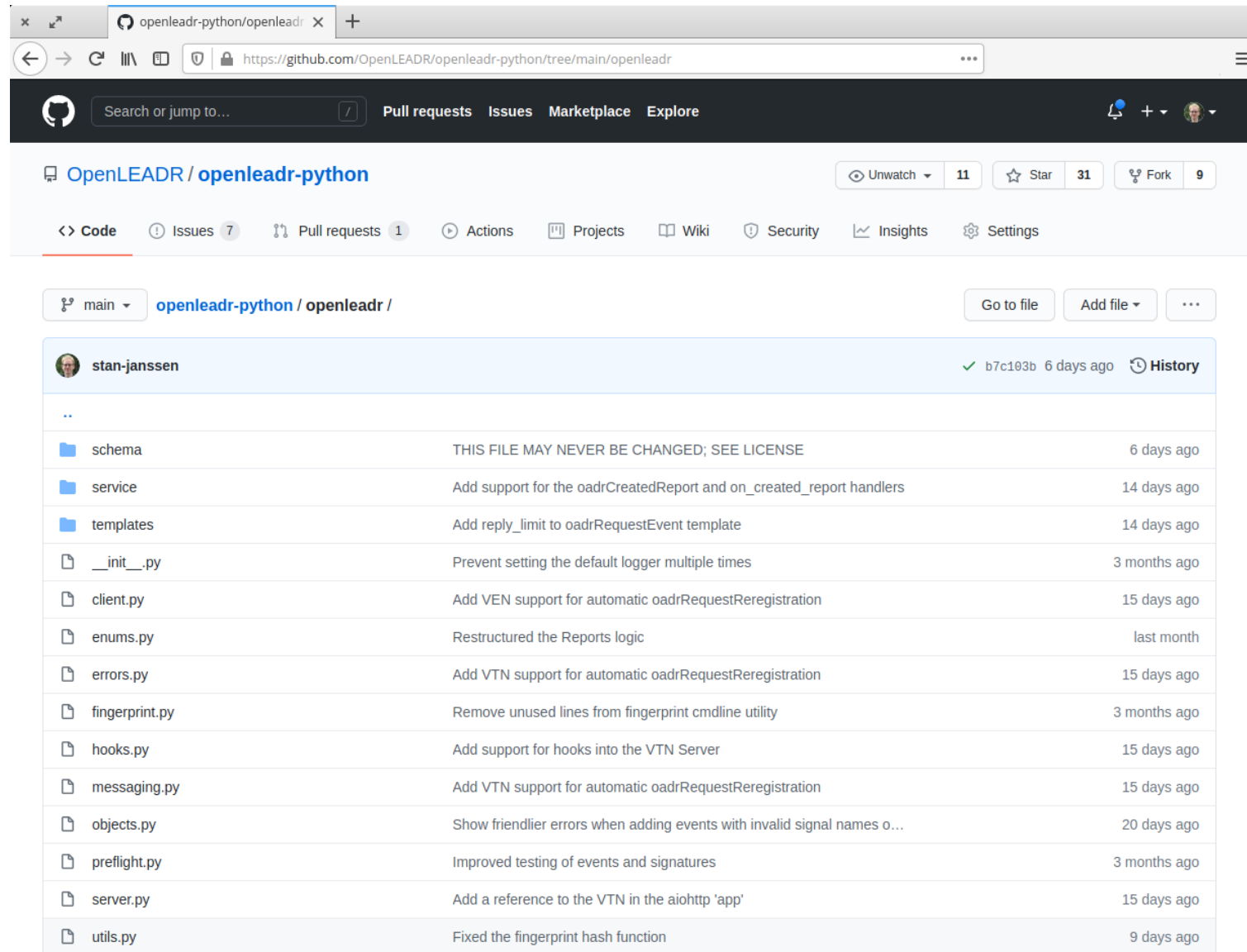
OpenLEADR is a project that is part of [Linux Foundation Energy](#). We build and maintain a fully featured and compliant OpenADR implementation for Python 3.

You can find the source code on [GitHub](#), and you can browse our documentation right [here](#).

OpenLEADR: (Open “LF Energy” ADR)

- OpenADR implementation in Python 3
- Usable for both VENs and VTNs
- ~2,000 lines of Python code
- Installable in a single command: `pip install openleadr`
- Integrate OpenADR into your own application in < 20 lines of code
- Documentation and example code available at openleadr.org/docs

Source Code on GitHub



openleadr-python/openleadr

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OpenLEADR / openleadr-python

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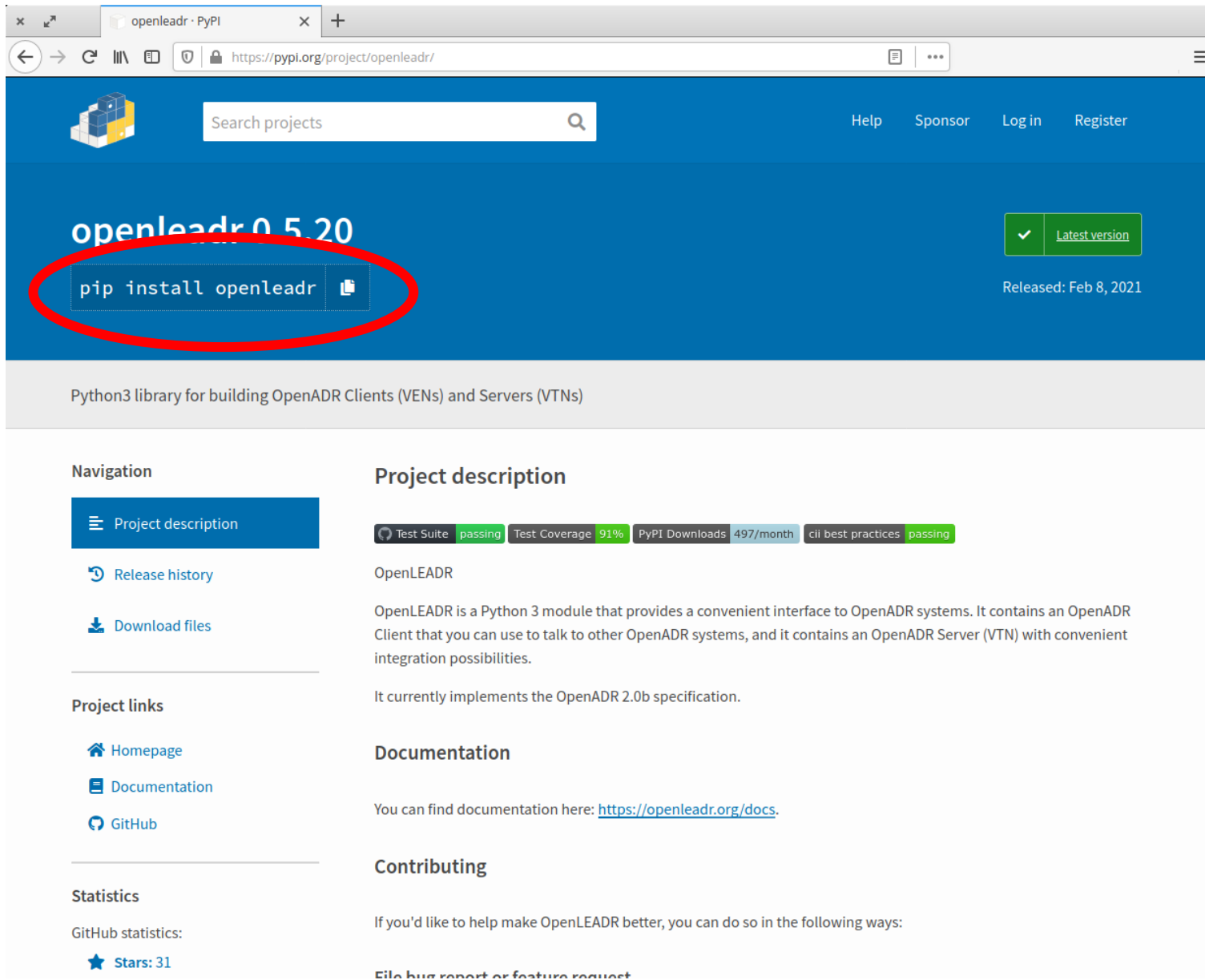
main openleadr-python / openleadr /

Go to file Add file ...

stan-janssen ✓ b7c103b 6 days ago History

..		
schema	THIS FILE MAY NEVER BE CHANGED; SEE LICENSE	6 days ago
service	Add support for the oadrCreatedReport and on_created_report handlers	14 days ago
templates	Add reply_limit to oadrRequestEvent template	14 days ago
__init__.py	Prevent setting the default logger multiple times	3 months ago
client.py	Add VEN support for automatic oadrRequestReregistration	15 days ago
enums.py	Restructured the Reports logic	last month
errors.py	Add VTN support for automatic oadrRequestReregistration	15 days ago
fingerprint.py	Remove unused lines from fingerprint cmdline utility	3 months ago
hooks.py	Add support for hooks into the VTN Server	15 days ago
messaging.py	Add VTN support for automatic oadrRequestReregistration	15 days ago
objects.py	Show friendlier errors when adding events with invalid signal names o...	20 days ago
preflight.py	Improved testing of events and signatures	3 months ago
server.py	Add a reference to the VTN in the aiohttp 'app'	15 days ago
utils.py	Fixed the fingerprint hash function	9 days ago

Installable from the Python Package Index



The screenshot shows the PyPI page for the `openleadr` package. The browser address bar shows `https://pypi.org/project/openleadr/`. The page header includes a search bar, navigation links (Help, Sponsor, Log in, Register), and the package name `openleadr 0.5.20`. A green checkmark and the text "Latest version" are visible. The command `pip install openleadr` is highlighted with a red circle. Below the command, it says "Released: Feb 8, 2021".

Python3 library for building OpenADR Clients (VENs) and Servers (VTNs)

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Project links

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Statistics

GitHub statistics:

- Stars: 31

Project description

Test Suite passing Test Coverage 91% PyPI Downloads 497/month cii best practices passing

OpenLEADR

OpenLEADR is a Python 3 module that provides a convenient interface to OpenADR systems. It contains an OpenADR Client that you can use to talk to other OpenADR systems, and it contains an OpenADR Server (VTN) with convenient integration possibilities.

It currently implements the OpenADR 2.0b specification.

Documentation

You can find documentation here: <https://openleadr.org/docs>.

Contributing


If you'd like to help make OpenLEADR better, you can do so in the following ways:

File bug report or feature request

Documentation on openleadr.org

Client — OpenLEADR 0.5.20 docu X
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← → ↻ 📄 🔒 https://openleadr.org/docs/client.html
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Star 31

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Client

An OpenADR Client (Virtual End Node or VEN) usually represents an entity that owns controllable devices. This can be electric vehicles, generators, wind turbines, refrigerated warehouses, et cetera. The client connects to a server, usually representing a utility company, to discuss possible cooperation on energy usage throughout the day.

Example VEN

A straightforward example of an OpenADR VEN, which has one report and an event handler, would look like this:

```

import asyncio
from datetime import timedelta
from openleadr import OpenADRClient, enable_default_logging

enable_default_logging()

async def collect_report_value():
    # This callback is called when you need to collect a value for your resource
    return 1.23

async def handle_event(event):
    # This callback receives an Event dict.
    # You should include code here that sends control signals to your resource
    return 'optIn'

# Create the client object
client = OpenADRClient(ven_name='ven123',
                      vtn_url='http://localhost:8080/OpenADR2/Simple/2.0')

# Add the report capability to the client
client.add_report(callback=collect_report_value,
                 resource_id='device001',
                 measurement='voltage',
                 sampling_rate=timedelta(seconds=10))

# Add event handling capability to the client
client.add_handler('on_event', handle_event)

# Run the client in the Python AsyncIO Event Loop
loop = asyncio.get_event_loop()
loop.create_task(client.run())
loop.run_forever()

```


Downloads from the Python Package Index



OpenLEADR might be useful for you if...

- ...you already have Python-based systems for energy management
- ...you're looking for an easy way to get started with OpenADR
- ...you're designing products or prototypes
- ...you're looking for a self-managed OpenADR VTN or VEN to 'talk to'

Want to try it out, or help us make it even better?

<https://github.com/openleadr>