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# **vcdextproxy Documentation**

***Release 0.1.1***

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Python based proxy looking at multiple AMQP queues for incoming requests of VMware vCloud Director's API Extensions and forwarding to specified REST backends.

- Free software: MIT license
- Documentation: <https://vcdextproxy.readthedocs.io>.

## 1.1 Features

- Support multiple queues subscriptions
- Can address multiple REST endpoints depending on extension(s)
- 1 REST endpoint is associated to 1 extension in vCD
- **Backend servers:**
  - HTTP + HTTPS support
  - Basic authentication
  - Basic URI rewriting
- **AMQP server:**
  - Multiple Exchange/Queue listening
  - Manage Exchange/Queue declarations
  - SSL support

- **Extension lifecycle:**
  - Deploy a newly declared extension
  - Redeploy an existing extension
- **vCloud Director:**
  - Support vCD from 9.1 to 10.0
  - Can check user's right based on per extension setting
  - Can check organization's membership of an user

## 1.2 Planned features

- #6 - Address some pre-checks like rights management
- #18 - Check organization's membership of an user
- #2 - Manage extension lifecycle (deploy/re-deploy)

## 1.3 User case

In a vCloud Director instance where 2 API extensions are used (*example1*, *example2*):

**vcdeproxy** subscribe to following AMQP queues:

- *example1*
- *example2*

When a message is sent to *example1* queue:

1. A URI path check is made: is */api/example1* a correct API path for extension named **example1** ?
2. If valid, all fields of the request are converted to REST request (as headers or as body content)
3. REST endpoint handle the request as a standard REST one (with a lot of vCloud information...)
4. REST endpoint replies to **vcdeproxy**
5. **vcdeproxy** reformat the reply as an AMQP reply message

## 1.4 Credits

This package was created with [Cookiecutter](#) and the [audreyr/cookiecutter-pypackage](#) project template.

### 2.1 Stable release

To install vcdextproxy, run this command in your terminal:

```
$ pip install vcdextproxy
```

This is the preferred method to install vcdextproxy, as it will always install the most recent stable release.

If you don't have [pip](#) installed, this [Python installation guide](#) can guide you through the process.

### 2.2 From sources

The sources for vcdextproxy can be downloaded from the [Github repo](#).

You can either clone the public repository:

```
$ git clone git://github.com/lrivallain/vcdextproxy
```

Or download the [tarball](#):

```
$ curl -OJL https://github.com/lrivallain/vcdextproxy/tarball/master
```

Once you have a copy of the source, you can install it with:

```
$ python setup.py install
```





## CHAPTER 3

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### Usage

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To use vcdextproxy in a project:

```
import vcdextproxy
```



Contributions are welcome, and they are greatly appreciated! Every little bit helps, and credit will always be given. You can contribute in many ways:

## 4.1 Types of Contributions

### 4.1.1 Report Bugs

Report bugs at <https://github.com/lrivallain/vcdextproxy/issues>.

If you are 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.

### 4.1.2 Fix Bugs

Look through the GitHub issues for bugs. Anything tagged with “bug” and “help wanted” is open to whoever wants to implement it.

### 4.1.3 Implement Features

Look through the GitHub issues for features. Anything tagged with “enhancement” and “help wanted” is open to whoever wants to implement it.

## 4.1.4 Write Documentation

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

## 4.1.5 Submit Feedback

The best way to send feedback is to file an issue at <https://github.com/lrivallain/vcdeproxy/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 contributions are welcome :)

## 4.2 Get Started!

Ready to contribute? Here's how to set up *vcdeproxy* for local development.

1. Fork the *vcdeproxy* repo on GitHub.
2. Clone your fork locally:

```
$ git clone git@github.com:your_name_here/vcdeproxy.git
```

3. Install your local copy into a virtualenv. Assuming you have virtualenvwrapper installed, this is how you set up your fork for local development:

```
$ mkvirtualenv vcdeproxy
$ cd vcdeproxy/
$ python setup.py develop
```

4. Create a branch for local development:

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

Now you can make your changes locally.

5. When you're done making changes, check that your changes pass flake8 and the tests, including testing other Python versions with tox:

```
$ flake8 vcdeproxy tests
$ python setup.py test or pytest
$ tox
```

To get flake8 and tox, just pip install them into your virtualenv.

6. 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
```

7. Submit a pull request through the GitHub website.

## 4.3 Pull Request Guidelines

Before you submit a pull request, check that it meets these guidelines:

1. The pull request should include tests.
2. If the pull request adds functionality, the docs should be updated. Put your new functionality into a function with a docstring, and add the feature to the list in README.rst.
3. The pull request should work for Python 2.7, 3.5, 3.6, 3.7 and 3.8, and for PyPy. Check [https://travis-ci.org/lrivalain/vcdextproxy/pull\\_requests](https://travis-ci.org/lrivalain/vcdextproxy/pull_requests) and make sure that the tests pass for all supported Python versions.

## 4.4 Tips

To run a subset of tests:

```
$ pytest tests.test_vcdextproxy
```

## 4.5 Deploying

A reminder for the maintainers on how to deploy. Make sure all your changes are committed (including an entry in HISTORY.rst). Then run:

```
$ bump2version patch # possible: major / minor / patch
$ git push
$ git push --tags
```

Travis will then deploy to PyPI if tests pass.



### 5.1 Development Lead

- Ludovic Rivallain <ludovic.rivallain@gmail.com>

### 5.2 Contributors

None yet. Why not be the first?





#### 6.1 0.1.x (2019-11-01)

- First release on PyPI.



## CHAPTER 7

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### Indices and tables

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- `genindex`
- `modindex`
- `search`