
dveo Documentation

Release 0.1.0

Author

Sep 26, 2018

Contents

1	Installation	3
2	Example scripts	5
3	Documentation	7
4	Tested platforms	9
5	How to enable API	11
6	Package contents	13
6.1	dveo package	13
6.1.1	Module contents	13
6.1.2	Utility functions	15
7	Indices and tables	17
	Python Module Index	19

This module tries to make using the DVEO REST API easier to use with Python.

Example of usage:

```
>>> from dveo import API
>>> dveo = API('203.0.113.12', 'p455w0rd')
>>> dveo.system_status()['system']['uptime']
OrderedDict([('days', '20'), ('hours', '7'), ('mins', '51')])
>>> dveo.list_inputs()
['net_stream1', 'net_stream2', 'net_stream3', 'net_stream4', ...]
>>> dveo.input_config('net_stream2')['inputname']
'BigTV'
>>> dveo.input_by_output_param('rtmptargeturi', 'acme', partial=True, include_
↪value=True)
[('net_stream1', 'rtmp://vid1.acme.net/stream'), ('net_stream2', 'rtmp://stream10.
↪acme.com/rtmp'), ('net_stream3', 'rtmp://stream11.acme.com/rtmp'), ...]
```

Check out the variables and commands of your DVEO device API on [http\(s\)://YOURDVEODEVICE:25599/metadata](http(s)://YOURDVEODEVICE:25599/metadata). The URL isn't protected. The port is set in the DVEO configuration.

CHAPTER 1

Installation

```
$ pipenv install dveo
```


CHAPTER 2

Example scripts

In the `examples` directory you'll find some implementation examples.

- `retrieve_stream_settings.py` loads input and output settings for one or more encoders and prints them and writes them to a json file.

CHAPTER 3

Documentation

Find autogenerated documentation at:

<https://dveo.readthedocs.io/>

CHAPTER 4

Tested platforms

This code has been tested against the following devices:

- MultiStreamer DIG/IP
- Brutus II
- Brutus III

If you have tested this on another device, please let me know.

How to enable API

To enable the REST API on your DVEO device, follow these steps:

1. Log in to web interface.
2. Click on the `SYSTEM SETUP` tab.
3. Open the `Web Server Setup` menu on the left.
4. Select the `API Web Server` submenu.
5. Check the `Enable API Web Server` box.
6. If you choose to set `Enable User Security` to `Yes`:
Fill in a password at `API User Password (apiuser)`.
7. Click the `Update` button.
8. Restart the service in the `Service Control` menu to the right. If it's stopped it'll be started.

6.1 dveo package

6.1.1 Module contents

```
class dveo.API (address, password, username='apiuser', port='25599', https=False,  
                data_format='json')
```

Bases: object

Instantiate a single DVEO API container object.

Parameters

- **address** (*str*) – IP address or hostname of encoder.
- **password** (*str*) – Password for the apiuser account, if user security is disabled anything is valid, like “.”.
- **username** (*str*) – (optional) apiuser username is usually locked to *apiuser*.
- **port** (*str or int*) – (optional) Port number configured for the API webserver, defaults to 25599.
- **https** (*bool*) – (optional) Enable https instead of http connections, defaults to *False*.
- **data_format** (*str*) – (optional) Choose between *json* and *xml* format. Older firmwares have problems with the JSON output format, defaults to *json*.

_login ()

Retrieve and set api_key for further authentication.

_request (*operation*, *payload={}*)

Send request to API, return result data.

Parameters

- **operation** (*str*) – Operation to request from the API.
- **payload** (*dict*) – Dict key:value pairs to send as POST data to API.

_string2bool (*string*)

Converts 'true' to True, 'false' to False and returns anything else.

_valid_key (*api_key=None*)

Test if *api_key* is valid.

input_by_input_name (*input_name*)

Lookup *input_id* (e.g. *net_stream1*) by configure input name.

input_by_output_name (*output_name*)

Lookup *input_id* by configured output name.

input_by_output_param (*output_param_name*, *output_param_value*, *partial=False*, *include_value=False*)

Lookup *input_id* by output config parameter.

Parameters

- **output_param_name** (*str*) – Name of output config parameter
- **output_param_value** (*str*) – Value of parameter
- **partial** (*bool*) – (optional) Allow for partial matches, defaults to *False*
- **include_value** – (optional) Include param value(s) in output, useful with *partial*, defaults to *False*

input_config (*input_id*)

Return dict of input stream config variables.

list_inputs ()

Return list of configured inputs.

list_outputs (*input_id*)

Return list of outputs configured for *input_id*.

output_config (*input_id*, *output_name*)

Return dict of output stream config variables.

read_service_log (*service_name*)

Retrieve log lines for service or stream.

Parameters **service_name** (*str*) – Name of service for which to retrieve logs

Result A list of log lines.

Return type list

reboot_device ()

Reboot the DVEO device.

reset_service (*service_name*)

Kill and restart a service.

restart_all_streams ()

Kill and restart all the active streams.

restart_service (*service_name*)

Restart service (without killing).

service_status (*service_name*)

Return status line of service (daemon or stream) as string.

start_service (*service_name*)

Start service.

stop_service (*service_name*)

Stop service.

system_status ()

Return dict of system status information.

6.1.2 Utility functions

Various utility functions for use with the DVEO API module

`dveo.utils.parse_xsd` (*xml*)

Parses API xsd document from xml string.

Parameters **xml** (*str*) – XSD document in string form

Returns dict with operations: parameters

Return type dict

CHAPTER 7

Indices and tables

- `genindex`
- `search`

d

[dveo](#), 13

[dveo.utils](#), 15

Symbols

`_login()` (dveo.API method), 13
`_request()` (dveo.API method), 13
`_string2bool()` (dveo.API method), 14
`_valid_key()` (dveo.API method), 14

A

API (class in dveo), 13

D

dveo (module), 13
dveo.utils (module), 15

I

`input_by_input_name()` (dveo.API method), 14
`input_by_output_name()` (dveo.API method), 14
`input_by_output_param()` (dveo.API method), 14
`input_config()` (dveo.API method), 14

L

`list_inputs()` (dveo.API method), 14
`list_outputs()` (dveo.API method), 14

O

`output_config()` (dveo.API method), 14

P

`parse_xsd()` (in module dveo.utils), 15

R

`read_service_log()` (dveo.API method), 14
`reboot_device()` (dveo.API method), 14
`reset_service()` (dveo.API method), 14
`restart_all_streams()` (dveo.API method), 14
`restart_service()` (dveo.API method), 14

S

`service_status()` (dveo.API method), 14

`start_service()` (dveo.API method), 14
`stop_service()` (dveo.API method), 14
`system_status()` (dveo.API method), 15