SEAScope installation manual for Windows

The main component of SEAScope is a viewer application whose capabilities can be extended using an optional Python module.

The Python module enables interactive features in the viewer: it allows you to extract data as serialized Python objects (pickle format) or produce plots by clicking on buttons in the user interface.

It also provides an API to control the viewer (even remotely, over the network) using scripts or notebooks.

Other SEAScope-related subjects are covered by documents available on the SEAScope website:

- User manual for the viewer and the Python package:

    `https://seascope.oceandatalab.com/docs/seascope_user_manual_20190703.pdf`

- Intermediate Data Format definition, general concept and glossary:

    `https://seascope.oceandatalab.com/docs/idf_specifications_1.2.pdf`

Requirements

Viewer

Aside from a consumer-grade computer with a 3D graphics card, the SEAScope viewer requires:

- a Windows 7 or newer operating system

- an OpenGL-compatible GPU driver (OpenGL version 3.3 or above)

Python package

The Python package for SEAScope comes in two flavors:

- a lightweight version which provides only the API for writing your own scripts.

- a full version which contains both the API and the processing tools for extractions and transects.

The lightweight version requires:

- Python 2.7 or 3.x

- flatbuffers (`https://pypi.org/project/flatbuffers/`)

In addition to these dependencies, the full version also requires:

- pyproj (`https://pypi.org/project/pyproj/`)

- numpy (`https://pypi.org/project/numpy/`)

- matplotlib (`https://pypi.org/project/matplotlib/`)

- scipy (`https://pypi.org/project/scipy/`)

Installation

Viewer

The SEAScope application has a small memory footprint

You should install the application on a partition with at least a few gigabytes though because it is easier to keep SEAScope, the data you want to display and the application workspace in the same directory (default behavior).

Simply extract the contents of the seascope-viewer-20190628.zip file somewhere on the partition you chose.

If your system meets the requirements, the installation of the SEAScope viewer is complete. Easy :)

Python package

The preferred way to install the SEAScope Python package is to use the "pip" command.

Retrieve the package on the SEAScope website:

```
pip download --no-deps "https://seascope.oceandatalab.com/python/seascope-python-0.2.162.tar.gz"
```

Then,

- for the lightweight version of the package, run:

  ```
  pip install ./seascope-python-0.2.162.tar.gz
  ```

- for the full version of the package, use:

  ```
  pip install "./seascope-python-0.2.162.tar.gz[processor]"
  ```

In order to avoid version conflicts between Python packages, we recommend to use virtual environments.

Troubleshooting

FAQ

Issues which have already been solved are documented on the SEAScope website, you can consult them at the following address: `https://seascope.oceandatalab.com/faq.html`

Compatibility

The SEAScope viewer has been tested on:

- Windows 7 x64

- Windows 10 x64

It should work on Windows Vista, 7, 8, 8,1 and 10.

Contact us

For any question, comment or bug report, please send an email to seascope@oceandatalab.com

You can also post a message in the SEAScope forum `https://forum.oceandatalab.com/seascope`

In order for issues to be solved quickly, bug reports must contain as much context as possible (Windows version, CPU model, amount of RAM, GPU model and driver, etc...).