Installation

There are several ways to install PySAT. At this point, either way assumes you are using a POSIX-compliant operating system with GNU make and patch installed and available from the command line. Installation also relies on a C/C++ compiler supporting C++11, e.g. GCC or Clang, as well as the `six` Python package. Finally, in order to compile "C extensions" included as modules, the installer requires the headers of Python and zlib. Both can be installed using the standard package repositories.

Note that although version *0.1.5.dev1* of PySAT brings Microsoft Windows support, the toolkit was not extensively tested on this system. If you find out that something is broken on Windows, please, let us know. Your input is important.

Also note that using Clang is preferred on MacOS as there may be an issue with GCC *being unaware of* the command-line option `--stdlib=libc++`. Clang is available on MacOS by default. To enforce the installer to use it, you need to set the environment variable `CC` to `/usr/bin/clang`. For that, do `export CC=/usr/bin/clang` if using Bash, or `setenv CC /usr/bin/clang` if using tsch. *This is not needed on Linux!*

Once all the prerequisites are installed, the simplest way to get and start using PySAT is to install the latest stable release of the toolkit from PyPI:

```
$ pip install python-sat[pblib,aiger]
```

We encourage you to install the *optional* dependencies *pblib* and *aiger*, as shown in the previous command. However, if it cannot be done (e.g. if their installation fails), you can install PySAT with the functionality of *aiger* and *pblib* disabled:

```
$ pip install python-sat
```

Once installed from PyPI, the toolkit at a later stage can be updated in the following way:

```
$ pip install -U python-sat
```

Alternatively, one can clone the repository and execute the following command in the local copy:

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

This will install the toolkit into the system's Python path. If another destination directory is preferred, it can be set by

```
$ python setup.py install --prefix=<where-to-install>
```

Both options (i.e. via `pip` or `setup.py`) are supposed to download and compile all the supported SAT solvers as well as prepare the installation of PySAT.