
HexBytes Documentation

Release 1.2.0

The Ethereum Foundation

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Python *bytes* subclass that decodes hex, with a readable console output

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1.1 hexbytes package

1.1.1 Quickstart

Install with:

```
python -m pip install hexbytes
```

Example *HexBytes* usage:

```
>>> from hexbytes import HexBytes

# convert from bytes to a prettier representation at the console
>>> HexBytes(b"\x03\x08wf\xbfh\xe7\x86q\xd1\xeaCj\xe0\x87\xdat\xa1'a\xda\xc0 \x01\x1a\x9e\xdd\xc4\x90\x0b\xf1;")
HexBytes('0x03087766bf68e78671d1ea436ae087da74a12761dac020011a9eddc4900bf13b')

# HexBytes accepts the hex string representation as well, ignoring case and 0x prefixes
>>> hb = HexBytes('03087766BF68E78671D1EA436AE087DA74A12761DAC020011A9EDDC4900BF13B')
>>> hb
HexBytes('0x03087766bf68e78671d1ea436ae087da74a12761dac020011a9eddc4900bf13b')

# HexBytes does not override the .hex() or __str__ methods of the parent `bytes` type
>>> hb = HexBytes('03087766BF68E78671D1EA436AE087DA74A12761DAC020011A9EDDC4900BF13B')
>>> hb.hex()
'03087766bf68e78671d1ea436ae087da74a12761dac020011a9eddc4900bf13b'
>>> print(hb)
b"\x03\x08wf\xbfh\xe7\x86q\xd1\xeaCj\xe0\x87\xdat\xa1'a\xda\xc0 \x01\x1a\x9e\xdd\xc4\x90\x0b\xf1;"

# Use the `to_0x_hex` method to get a 0x-prefixed hex string
>>> hb.to_0x_hex()
'0x03087766bf68e78671d1ea436ae087da74a12761dac020011a9eddc4900bf13b'

# get the first byte:
>>> hb[0]
3
```

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```
# show how many bytes are in the value
>>> len(hb)
32

# cast back to the basic `bytes` type
>>> bytes(hb)
b"\x03\x08wf\xbfh\xe7\x86q\xd1\xeaCj\xe0\x87\xdat\xa1'a\xda\xc0 \x01\x1a\x9e\xdd\xc4\x90\
↪\x0b\xff1;"
```

1.1.2 HexBytes

class `hexbytes.main.HexBytes`(*val*: *bool* | *bytearray* | *bytes* | *int* | *str* | *memoryview*)

Bases: `bytes`

HexBytes is a *very* thin wrapper around the python built-in `bytes` class.

It has these changes:

1. Accepts more initializing values, like hex strings, non-negative integers, and booleans
2. The representation at console (`__repr__`) is 0x-prefixed
3. The `to_0x_hex` method is added to convert the bytes to a 0x-prefixed hex string

`to_0x_hex()` → *str*

Convert the bytes to a 0x-prefixed hex string

1.2 Release Notes

1.2.1 hexbytes v1.2.0 (2024-03-19)

Features

- Add `to_0x_hex()` method to provide a quick, explicit way to get an 0x-prefixed string (#43)

1.2.2 hexbytes v1.1.0 (2024-03-01)

Internal Changes - for hexbytes Contributors

- Change the name of `master` branch to `main` (#40)
- Merge template updates, notably adding py312 support (#41)

1.2.3 hexbytes v1.0.0 (2023-11-07)

Breaking Changes

- Move HexBytes prepend of `0x` from `hex` method to `__repr__` to not break `hex` of parent `bytes` class (#38)
- Drop python 3.7 support (#39)

Internal Changes - for hexbytes Contributors

- Added missing *build* dependency. (#32)
- Add `build.os` config for `readthedocs` (#34)
- Change to using `pre-commit` to manage linting tools (#35)
- Merge project template updates and bump `mypy` to `v1.5.1` (#36)
- Merge template - `.gitignore` updates and other fixes (#37)
- Merge template updates, including additional linting, move most lint config to `pyproject.toml` (#39)

1.2.4 HexBytes v0.3.1 (2023-06-08)

Improved Documentation

- pull in `ethereum-python-project-template` updates (#31)

Internal Changes - for hexbytes Contributors

- pull in `ethereum-python-project-template` updates (#31)

1.2.5 HexBytes v0.3.0 (2022-08-17)

Miscellaneous changes

- #28

Breaking changes

- Drop support for Python 3.6, update Sphinx doc dependency requirement (#27)

1.2.6 HexBytes v0.2.3 (2022-08-11)

Features

- Type signature now accepts *memoryview* when creating `HexBytes`. It converts to a *bytes* internally, so not any performance benefit. But at least it's *possible* now, and `mypy` stops complaining. (#22)

Performance improvements

- Improve speed of the check for 0x at the beginning of the hex string. Similar to changes in eth-utils. (Technically merged by #22, but first posted in #21) (#21)

Internal Changes - for hexbytes Contributors

- Merged in latest changes from project template (#24)

Miscellaneous changes

- #25, #26

1.2.7 HexBytes v0.2.2 (2021-08-25)

Miscellaneous changes

- Pass mypy tests with *–no-implicit-reexport* (#15)

Internal Changes - for hexbytes Contributors

- Merge in template changes from the last year. Pass pydocstyle tests at the new major version. (#16)

1.2.8 HexBytes v0.2.1 (2020-06-02)

Features

- Officially support bytearray, int, and bool as inputs to *HexBytes*. Drop the dependency on eth-utils, for a much smaller & faster install. (#12)

1.2.9 v0.2.0

Released June 3, 2019

- **Breaking Changes**
 - Dropped Python3.5 support (only in name at this release, but py3.6 features will be used soon #10)
- Features
 - A slice of HexBytes will now produce another HexBytes object #9
- Maintenance
 - Added type hints #7

1.2.10 v0.1.0

Released Mar 1, 2018

- Marked stable
- eth-utils v1.0.1 support

1.2.11 v0.1.0-beta.1

Released Feb 21, 2018

- pypy3 support
- eth-utils v1-beta.2 support
- Some generic template updates

1.2.12 v0.1.0-beta.0

Released Jan 30, 2018

- Tested a basic integration with eth-rlp
- Given the simplicity of the project and the longer usage history in web3.py, it is reasonable to bump to beta immediately.

1.2.13 v0.1.0-alpha.2

Released Jan 30, 2018

- Added hypothesis tests
- Added some docs
- Update eth-utils to get all required functionality
- Passes all tests

1.2.14 v0.1.0-alpha.1

- Launched repository, claimed names for pip, RTD, github, etc

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