
aiosonic

Release 0.5.0

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Really Fast asynchronous HTTP 1.1 client, Support for http 2.0 is planned.

Current version is 0.5.0.

Repo is hosted at [Github](#).

FEATURES

- Keepalive and Smart Pool of Connections
- Multipart File Uploads
- Chunked responses handling
- Chunked requests
- Fully type annotated.
- Connection Timeouts
- Automatic Decompression
- Follow Redirects
- 100% test coverage.

REQUIREMENTS

- Python>=3.6

CHAPTER THREE

INSTALL

```
$ pip install aiosonic
```


GETTING STARTED

```
import asyncio
import aiohttp
import json

async def run():
    """Start."""
    # Sample get request
    response = await aiohttp.get('https://www.google.com/')
    assert response.status_code == 200
    assert 'Google' in (await response.text())

    url = "https://postman-echo.com/post"
    posted_data = {'foo': 'bar'}

    # post data as multipart form
    response = await aiohttp.post(url, data=posted_data)

    assert response.status_code == 200
    data = json.loads(await response.content())
    assert data['form'] == posted_data

    # posted as json
    response = await aiohttp.post(url, json=posted_data)

    assert response.status_code == 200
    data = json.loads(await response.content())
    assert data['json'] == posted_data

    # Sample get request + timeout
    from aiohttp.timeout import Timeouts
    timeouts = Timeouts(
        sock_read=10,
        sock_connect=3
    )
    response = await aiohttp.get('https://www.google.com/', timeouts=timeouts)
    assert response.status_code == 200
    assert 'Google' in (await response.text())

    print('success')

if __name__ == '__main__':
    loop = asyncio.get_event_loop()
```

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```
loop.run_until_complete(run())
```

BENCHMARKS

The numbers speak for themselves

```
$ python tests/performance.py
doing tests...
{
  "aiohttp": "1000 requests in 247.47 ms",
  "requests": "1000 requests in 3625.10 ms",
  "aiosonic": "1000 requests in 80.09 ms",
  "aiosonic cyclic": "1000 requests in 128.71 ms",
  "httpx": "1000 requests in 528.73 ms"
}
aiosonic is 209.00% faster than aiohttp
aiosonic is 4426.34% faster than requests
aiosonic is 60.70% faster than aiosonic cyclic
aiosonic is 560.17% faster than httpx
```


CONTRIBUTING

1. Fork
2. create a branch *feature/your_feature*
3. commit - push - pull request

Thanks :)

INDICES AND TABLES

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

7.1 Examples

TODO

7.2 Reference

TODO: get better this page

7.2.1 Methods

async `aiosonic.request` (*url: str, method: str = 'GET', headers: Union[Dict[str, str], List[Tuple[str, str]]], aiosonic.HttpHeaders = None, params: Union[Dict[str, str], Sequence[Tuple[str, str]]] = None, data: Union[str, bytes, dict, tuple, AsyncIterator[bytes], Iterator[bytes]] = None, connector: aiosonic.connectors.TCPConnector = None, multipart: bool = False, verify: bool = True, ssl: ssl.SSLContext = None, timeouts: aiosonic.timeout.Timeouts = None, follow: bool = False*) → `aiosonic.HttpResponse`

Do http request.

Params:

- **url:** url of request
- **method:** Http method of request
- **headers:** headers to add in request
- **params:** query params to add in request if not manually added
- **data:** Data to be sent, this param is ignored for get requests.
- **connector:** TCPConnector to be used if provided
- **multipart:** Tell aiosonic if request is multipart

- **verify**: parameter to indicate whether to verify ssl
- **ssl**: this parameter allows to specify a custom ssl context
- **timeouts**: parameter to indicate timeouts for request
- **follow**: parameter to indicate whether to follow redirects

```
async aiosonic.get (url: str, headers: Union[Dict[str, str], List[Tuple[str, str]], aiosonic.HttpHeaders]
    = None, params: Union[Dict[str, str], Sequence[Tuple[str, str]]] = None, connector:
    aiosonic.connectors.TCPConnector = None, verify: bool = True, ssl:
    ssl.SSLContext = None, timeouts: aiosonic.timeout.Timeouts = None, follow: bool
    = False) → aiosonic.HttpResponse
```

Do get http request.

```
async aiosonic.post (url: str, data: Union[str, bytes, dict, tuple, AsyncIterator[bytes],
    Iterator[bytes]] = None, headers: Union[Dict[str, str], List[Tuple[str,
    str]], aiosonic.HttpHeaders] = None, json: dict = None, params:
    Union[Dict[str, str], Sequence[Tuple[str, str]]] = None, connector:
    aiosonic.connectors.TCPConnector = None, json_serializer=<function dumps>,
    multipart: bool = False, verify: bool = True, ssl: ssl.SSLContext = None,
    timeouts: aiosonic.timeout.Timeouts = None, follow: bool = False) →
    aiosonic.HttpResponse
```

Do post http request.

```
async aiosonic.put (url: str, data: Union[str, bytes, dict, tuple, AsyncIterator[bytes],
    Iterator[bytes]] = None, headers: Union[Dict[str, str], List[Tuple[str, str]],
    aiosonic.HttpHeaders] = None, json: dict = None, params: Union[Dict[str, str],
    Sequence[Tuple[str, str]]] = None, connector: aiosonic.connectors.TCPConnector
    = None, json_serializer=<function dumps>, multipart: bool = False, verify: bool
    = True, ssl: ssl.SSLContext = None, timeouts: aiosonic.timeout.Timeouts = None,
    follow: bool = False) → aiosonic.HttpResponse
```

Do put http request.

```
async aiosonic.patch (url: str, data: Union[str, bytes, dict, tuple, AsyncIterator[bytes],
    Iterator[bytes]] = None, headers: Union[Dict[str, str], List[Tuple[str, str]],
    aiosonic.HttpHeaders] = None, json: dict = None, params:
    Union[Dict[str, str], Sequence[Tuple[str, str]]] = None, connector:
    aiosonic.connectors.TCPConnector = None, json_serializer=<function
    dumps>, multipart: bool = False, verify: bool = True, ssl: ssl.SSLContext =
    None, timeouts: aiosonic.timeout.Timeouts = None, follow: bool = False) →
    aiosonic.HttpResponse
```

Do patch http request.

```
async aiosonic.delete (url: str, data: Union[str, bytes, dict, tuple, AsyncIterator[bytes],
    Iterator[bytes]] = None, headers: Union[Dict[str, str], List[Tuple[str, str]],
    aiosonic.HttpHeaders] = None, json: dict = None, params:
    Union[Dict[str, str], Sequence[Tuple[str, str]]] = None, connector:
    aiosonic.connectors.TCPConnector = None, json_serializer=<function
    dumps>, multipart: bool = False, verify: bool = True, ssl: ssl.SSLContext =
    None, timeouts: aiosonic.timeout.Timeouts = None, follow: bool = False) →
    aiosonic.HttpResponse
```

Do delete http request.

7.2.2 Classes

```
class aiosonic.HttpHeaders (data=None, **kwargs)
    Http headers dict.
```

```
class aiosonic.HttpResponse
```

Custom HttpResponse class for handling responses.

Properties:

- `status_code` (int): response status code
- `headers` (HttpHeaders): headers in case insensitive dict
- `raw_headers` (List[Tuple[bytes, bytes]]): headers as raw format

```
async content () → bytes
```

Read response body.

```
async json (json_decoder=<function loads>) → dict
```

Read response body.

```
read_chunks () → AsyncIterator[bytes]
```

Read chunks from chunked response.

```
property status_code
```

Get status code.

```
async text () → str
```

Read response body.

```
class aiosonic.timeout.Timeouts (sock_connect: int = 5, sock_read: int = 60, pool_acquire: int  
                                = None, request_timeout: int = None)
```

Timeouts class wrapper.

7.2.3 Types

```
aiosonic.DataType = typing.Union[str, bytes, dict, tuple, typing.AsyncIterator[bytes], typ
```

The central part of internal API.

This represents a generic version of type ‘origin’ with type arguments ‘params’. There are two kind of these aliases: user defined and special. The special ones are wrappers around builtin collections and ABCs in `collections.abc`. These must have ‘name’ always set. If ‘inst’ is False, then the alias can’t be instantiated, this is used by e.g. `typing.List` and `typing.Dict`.

```
aiosonic.HeadersType = typing.Union[typing.Dict[str, str], typing.List[typing.Tuple[str, str]]
```

Headers

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