
urlfetch Documentation

Release 0.6.2

Yue Du <ifduyue@gmail.com>

March 22, 2014

urllib3 is a simple, lightweight and easy to use HTTP client for [Python](#). It is distributed as a single file module and has no dependencies other than the [Python Standard Library](#).

Getting Started

1.1 Install

```
$ pip install urlfetch --upgrade
```

OR:

```
$ easy_install urlfetch --upgrade
```

OR grab the latest source from github [ifduyue/urlfetch](https://github.com/ifduyue/urlfetch):

```
$ git clone git://github.com/ifduyue/urlfetch.git
$ cd urlfetch
$ python setup.py install
```

1.2 Usage

```
>>> import urlfetch
>>> r = urlfetch.get("http://docs.python.org/")
>>> r.status, r.reason
(200, 'OK')
>>> r.getheader('content-type')
'text/html; charset=UTF-8'
>>> r.getheader('Content-Type')
'text/html; charset=UTF-8'
>>> r.content
...

```


2.1 Examples

2.1.1 urlfetch at a glance

```
>>> import urlfetch
>>> r = urlfetch.get('https://twitter.com/')
>>> r.status, r.reason
(200, 'OK')
>>> r.total_time
0.924283027648926
>>> r.reqheaders
{'Host': 'twitter.com', 'Accept-Encoding': 'gzip, deflate, compress, identity, *', 'Accept': '*/*', 'User-Agent': 'urlfetch/0.5.3'}
>>> len(r.content), type(r.content)
(72560, <type 'str'>)
>>> len(r.text), type(r.text)
(71770, <type 'unicode'>)
>>> r.headers
{'status': '200 OK', 'content-length': '15017', 'strict-transport-security': 'max-age=631138519', 'x-transaction': '4a281c79631ee04e', 'content-encoding': 'gzip', 'set-cookie': 'k=10.36.121.114.1359712350849032; path=/; expires=Fri, 08-Feb-13 09:52:30 GMT; domain=.twitter.com, guest_id=v1%3A135971235085257249; domain=.twitter.com; path=/; expires=Sun, 01-Feb-2015 21:52:30 GMT, _twitter_sess=BAh7CjoPY3JlYXRlZF9hdGwrCIXyK5U8AToMY3NyZl9pZCIlNGIwYjA2NWQ2%250AZGE0MGUzN2Y5Y2Y3NzViYTc5MjdkM2Q6FWluX25ld19lc2VyX2Zsb3cwIgp%250AbGFzaElDOidBY3Rpb25Db250cm9sbGVyOjBpG bGFzaDo6Rmxhc2hIYXNoewAG%250AOgpAdXNlZHSaOgdpZCIlM2Y4MD1lNjVlNzA2M2Q0YTI4NjVmY2UyMWYzZmRh%250AMWY%253D--2869053b52dc7269a8a09ee3608737e0291e4ec1; domain=.twitter.com; path=/; HttpOnly', 'expires': 'Tue, 31 Mar 1981 05:00:00 GMT', 'x-mid': 'eb2ca7a2ae1109f1b2aeal0729cdcfld1d4821af5', 'server': 'tfe', 'last-modified': 'Fri, 01 Feb 2013 09:52:30 GMT', 'x-runtime': '0.13026', 'etag': '"15f3eb25198930feb6817975576b651b"', 'pragma': 'no-cache', 'cache-control': 'no-cache, no-store, must-revalidate, pre-check=0, post-check=0', 'date': 'Fri, 01 Feb 2013 09:52:30 GMT', 'x-frame-options': 'SAMEORIGIN', 'content-type': 'text/html; charset=utf-8', 'x-xss-protection': '1; mode=block', 'vary': 'Accept-Encoding'}
>>> r.getheaders()
[('status', '200 OK'), ('content-length', '15017'), ('expires', 'Tue, 31 Mar 1981 05:00:00 GMT'), ('x-transaction', '4a281c79631ee04e'), ('content-encoding', 'gzip'), ('set-cookie', 'k=10.36.121.114.1359712350849032; path=/; expires=Fri, 08-Feb-13 09:52:30 GMT; domain=.twitter.com, guest_id=v1%3A135971235085257249; domain=.twitter.com; path=/; expires=Sun, 01-Feb-2015 21:52:30 GMT, _twitter_sess=BAh7CjoPY3JlYXRlZF9hdGwrCIXyK5U8AToMY3NyZl9pZCIlNGIwYjA2NWQ2%250AZGE0MGUzN2Y5Y2Y3NzViYTc5MjdkM2Q6FWluX25ld19lc2VyX2Zsb3cwIgp%250AbGFzaElDOidBY3Rpb25Db250cm9sbGVyOjBpG bGFzaDo6Rmxhc2hIYXNoewAG%250AOgpAdXNlZHSaOgdpZCIlM2Y4MD1lNjVlNzA2M2Q0YTI4NjVmY2UyMWYzZmRh%250AMWY%253D--2869053b52dc7269a8a09ee3608737e0291e4ec1; domain=.twitter.com; path=/; HttpOnly'), ('expires', 'Tue, 31 Mar 1981 05:00:00 GMT'), ('x-mid', 'eb2ca7a2ae1109f1b2aeal0729cdcfld1d4821af5'), ('server', 'tfe'), ('last-modified', 'Fri, 01 Feb 2013 09:52:30 GMT'), ('x-runtime', '0.13026'), ('etag', '"15f3eb25198930feb6817975576b651b"'), ('pragma', 'no-cache'), ('cache-control', 'no-cache, no-store, must-revalidate, pre-check=0, post-check=0'), ('date', 'Fri, 01 Feb 2013 09:52:30 GMT'), ('x-frame-options', 'SAMEORIGIN'), ('content-type', 'text/html; charset=utf-8'), ('x-xss-protection', '1; mode=block'), ('vary', 'Accept-Encoding')]
```

```
NzViYtc5MjdkM2Q6FWluX25ld191c2VyX2Zsb3cwIgp%250AbGFzaElDoidBY3Rpb25Db250cm9sbGVyOjpGbGFzaDo6Rmxhc2hIYXNoewAG%250AogpAdXNlZHsAOgdpZCIlM2Y4MD1lNjVlNzA2M2Q0YTI4NjVmY2UyMWYzZmRh%250AMWY%253D--2869053b52dc7269a8a09ee3608737e0291e4ec1; domain=.twitter.com; path=/; HttpOnly'), ('strict-transport-security', 'max-age=631138519'), ('x-mid', 'eb2ca7a2ae1109f1b2aea10729cdcdf1d4821af5'), ('server', 'tfe'), ('last-modified', 'Fri, 01 Feb 2013 09:52:30 GMT'), ('x-runtime', '0.13026'), ('etag', '"15f3eb25198930feb6817975576b651b"'), ('pragma', 'no-cache'), ('cache-control', 'no-cache, no-store, must-revalidate, pre-check=0, post-check=0'), ('date', 'Fri, 01 Feb 2013 09:52:30 GMT'), ('x-frame-options', 'SAMEORIGIN'), ('content-type', 'text/html; charset=utf-8'), ('x-xss-protection', '1; mode=block'), ('vary', 'Accept-Encoding')]
>>> # getheader doesn't care whether you write 'content-length' or 'Content-Length'
>>> # It's case insensitive
>>> r.getheader('content-length')
'15017'
>>> r.getheader('Content-Length')
'15017'
>>> r.cookies
{'guest_id': 'v1%3A135971235085257249', '_twitter_sess': 'BAh7CjoPY3JlYXRlZF9hdGwrCIXyK5U8AToMY3NyZl9pZCIlNGIwYjA2NWQ2%250AZGE0MGUzN2Y5Y2Y3NzViYtc5MjdkM2Q6FWluX25ld191c2VyX2Zsb3cwIgp%250AbGFzaElDoidBY3Rpb25Db250cm9sbGVyOjpGbGFzaDo6Rmxhc2hIYXNoewAG%250AogpAdXNlZHsAOgdpZCIlM2Y4MD1lNjVlNzA2M2Q0YTI4NjVmY2UyMWYzZmRh%250AMWY%253D--2869053b52dc7269a8a09ee3608737e0291e4ec1', 'k': '10.36.121.114.1359712350849032'}
>>> r.cookiestring
'guest_id=v1%3A135971235085257249; _twitter_sess=BAh7CjoPY3JlYXRlZF9hdGwrCIXyK5U8AToMY3NyZl9pZCIlNGIwYjA2NWQ2%250AZGE0MGUzN2Y5Y2Y3NzViYtc5MjdkM2Q6FWluX25ld191c2VyX2Zsb3cwIgp%250AbGFzaElDoidBY3Rpb25Db250cm9sbGVyOjpGbGFzaDo6Rmxhc2hIYXNoewAG%250AogpAdXNlZHsAOgdpZCIlM2Y4MD1lNjVlNzA2M2Q0YTI4NjVmY2UyMWYzZmRh%250AMWY%253D--2869053b52dc7269a8a09ee3608737e0291e4ec1; k=10.36.121.114.1359712350849032'
```

2.1.2 urlfetch.fetch

`urlfetch.fetch()` will determine the HTTP method (GET or POST) for you.

```
>>> import urlfetch
>>> # It's HTTP GET
>>> r = urlfetch.fetch("http://python.org/")
>>> r.status
200
>>> # Now it's HTTP POST
>>> r = urlfetch.fetch("http://python.org/", data="foobar")
>>> r.status
200
```

2.1.3 Add HTTP headers

```
>>> from urlfetch import fetch
>>> r = fetch("http://python.org/", headers={"User-Agent": "urlfetch"})
>>> r.status
200
>>> r.reqheaders
{'Host': 'python.org', 'Accept': '*/.*', 'User-Agent': 'urlfetch'}
>>> # alternatively, you can turn randua on
```

```
>>> # ranua means generate a random user-agent
>>> r = fetch("http://python.org/", randua=True)
>>> r.status
200
>>> r.reqheaders
{'Host': u'python.org', 'Accept': '*/*', 'User-Agent': 'Mozilla/5.0 (Windows NT
6.1; WOW64) AppleWebKit/535.1 (KHTML, like Gecko) Chrome/14.0.835.8 Safari/535.1
'}
>>> r = fetch("http://python.org/", randua=True)
>>> r.status
200
>>> r.reqheaders
{'Host': u'python.org', 'Accept': '*/*', 'User-Agent': 'Mozilla/5.0 (Windows; U;
Windows NT 6.0; en-US; rv:1.9.2) Gecko/20100115 Firefox/3.6 (.NET CLR 3.5.30729
)'}

```

2.1.4 POST data

```
>>> from urlfetch import post
>>> r = post("http://python.org", data={'foo': 'bar'})
>>> r.status
200
>>> # data can be bytes
>>> r = post("http://python.org", data="foo=bar")
>>> r.status
200

```

2.1.5 Upload files

```
>>> from urlfetch import post
>>> r = post(
...     'http://127.0.0.1:8888/',
...     headers = {'Referer': 'http://127.0.0.1:8888/'},
...     data = {'foo': 'bar'},
...     files = {
...         'formname1': open('/tmp/path/to/file1', 'rb'),
...         'formname2': ('filename2', open('/tmp/path/to/file2', 'rb')),
...         'formname3': ('filename3', 'binary data of /tmp/path/to/file3'),
...     },
... )
>>> r.status
200

```

2.1.6 Basic auth and call github API

```
>>> from urlfetch import get
>>> import pprint
>>> r = get('https://api.github.com/gists', auth=('username', 'password'))
>>> pprint.pprint(r.json)
[{u'comments': 0,
  u'created_at': u'2012-03-21T15:22:13Z',
  u'description': u'2_urlfetch.py',
  u'files': {u'2_urlfetch.py': {u'filename': u'2_urlfetch.py',

```

```

        u'language': u'Python',
        u'raw_url': u'https://gist.github.com/raw/2148359/58c9062e0fc7bf6b9c',
        u'size': 218,
        u'type': u'application/python'}}},
    u'git_pull_url': u'git://gist.github.com/2148359.git',
    u'git_push_url': u'git@gist.github.com:2148359.git',
    u'html_url': u'https://gist.github.com/2148359',
    u'id': u'2148359',
    u'public': True,
    u'updated_at': u'2012-03-21T15:22:13Z',
    u'url': u'https://api.github.com/gists/2148359',
    u'user': {u'avatar_url': u'https://secure.gravatar.com/avatar/68b703a082b87cce010b1af5836711b3?d=ht
tars%2Fgravatar-140.png',
              u'gravatar_id': u'68b703a082b87cce010b1af5836711b3',
              u'id': 568900,
              u'login': u'ifduyue',
              u'url': u'https://api.github.com/users/ifduyue'}}},
    ...]

```

2.1.7 urlfetch.Session

`urlfetch.Session` can hold common headers and cookies. Every request issued by a `urlfetch.Session` object will bring up these headers and cookies. `urlfetch.Session` plays a role in handling cookies, just like a `cookiejar`.

```

>>> from urlfetch import Session
>>> s = Session(headers={"User-Agent": "urlfetch session"}, cookies={"foo": "bar"})
>>> r = s.get("https://twitter.com/")
>>> r.status
200
>>> r.reqheaders
{'Host': u'twitter.com', 'Cookie': 'foo=bar', 'Accept': '*/*', 'User-Agent': 'ur
lfetch session'}
>>> r.cookies
{'guest_id': 'v1%3A134136902538582791', '_twitter_sess': 'BAh7CDoPY3JlYXRlZF9hdG
wrCGoD0084ASIKZmxhc2hJQzonQWN0aW9uQ29u%250AdHJvbGxlcjo6Rmxhc2g6OkZsYXNoSGFzaHsAB
joKQHVzZWR7ADoHaWQiJWM2%250AMDYMTY2YjFhY2YzNjk3NzU3ZmEwYTZjMTc2ZWl0--81b8c092d2
64beladb8b52eef177ab4466520f65', 'k': '10.35.53.118.1341369025382790'}
>>> r.cookiesstring
'guest_id=v1%3A134136902538582791; _twitter_sess=BAh7CDoPY3JlYXRlZF9hdGwrCGoD008
4ASIKZmxhc2hJQzonQWN0aW9uQ29u%250AdHJvbGxlcjo6Rmxhc2g6OkZsYXNoSGFzaHsABjoKQHVzZW
R7ADoHaWQiJWM2%250AMDYMTY2YjFhY2YzNjk3NzU3ZmEwYTZjMTc2ZWl0--81b8c092d264beladb8
b52eef177ab4466520f65; k=10.35.53.118.1341369025382790'
>>> s.putheader("what", "a nice day")
>>> s.putcookie("yah", "let's dance")
>>> r = s.get("https://twitter.com/")
>>> r.status
200
>>> r.reqheaders
{'Host': u'twitter.com', 'Cookie': "guest_id=v1%3A134136902538582791; _twitter_s
ess=BAh7CDoPY3JlYXRlZF9hdGwrCGoD0084ASIKZmxhc2hJQzonQWN0aW9uQ29u%250AdHJvbGxlcjo
6Rmxhc2g6OkZsYXNoSGFzaHsABjoKQHVzZWR7ADoHaWQiJWM2%250AMDYMTY2YjFhY2YzNjk3NzU3Zm
EwYTZjMTc2ZWl0--81b8c092d264beladb8b52eef177ab4466520f65; k=10.35.53.118.1341369
025382790; foo=bar; yah=let's dance", 'What': 'a nice day', 'Accept': '*/*', 'Us
er-Agent': 'urlfetch session'}

```

2.1.8 Streaming

```
>>> import urllib3
>>> with urllib3.get('http://some.very.large/file') as r:
>>>     with open('some.very.large.file', 'wb') as f:
>>>         for chunk in r:
>>>             f.write(chunk)
```

2.1.9 Proxies

```
>>> from urllib3 import get
>>> r = get('http://docs.python.org/', proxies={'http': '127.0.0.1:8888'})
>>> r.status, r.reason
(200, 'OK')
>>> r.headers
{'content-length': '8719', 'via': '1.1 tinyproxy (tinyproxy/1.8.2)', 'accept-ranges': 'bytes', 'vary': 'Accept-Encoding', 'server': 'Apache/2.2.16 (Debian)', 'last-modified': 'Mon, 30 Jul 2012 19:22:48 GMT', 'etag': '"13cc5e4-220f-4c610fcaf-d200"', 'date': 'Tue, 31 Jul 2012 04:18:26 GMT', 'content-type': 'text/html'}
```

2.1.10 Redirects

```
>>> from urllib3 import get
>>> r = get('http://tinyurl.com/urllib3', max_redirects=10)
>>> r.history
[<urllib3.Response object at 0x274b8d0>]
>>> r.history[-1].headers
{'content-length': '0', 'set-cookie': 'tinyUUID=036051f7dc296a033f0608cf; expires=Fri, 23-Aug-2013 10:25:30 GMT; path=/; domain=.tinyurl.com', 'x-tiny': 'cache 0.0016100406646729', 'server': 'TinyURL/1.6', 'connection': 'close', 'location': 'https://github.com/iftuyue/urllib3', 'date': 'Thu, 23 Aug 2012 10:25:30 GMT', 'content-type': 'text/html'}
>>> r.headers
{'status': '200 OK', 'content-encoding': 'gzip', 'transfer-encoding': 'chunked', 'set-cookie': '_gh_sess=BAh7BzoPc2Vzc2lvb19pZCI1N2VjNWMM3NjMzOTJhY2YyMGYyNTJlYzU4NmZjMmRlY2U6EF9jc3JmX3Rva2VuIjFlclVzYnpXyYlUTlNLV0ZqeXg4S1NRQUx3VllmM3VEa2ZaZmlIRHBrSGRzPQ%3D%3D--cbe63e27e8e6bf07edf0447772cf512d2fbdf2e2; path=/; expires=Sat, 01-Jan-2022 00:00:00 GMT; secure; HttpOnly', 'strict-transport-security': 'max-age=2592000', 'connection': 'keep-alive', 'server': 'nginx/1.0.13', 'x-runtime': '104', 'etag': '"4137339e0195583b4f034c33202df9e8"', 'cache-control': 'private, max-age=0, must-revalidate', 'date': 'Thu, 23 Aug 2012 10:25:31 GMT', 'x-frame-options': 'deny', 'content-type': 'text/html; charset=utf-8'}
>>>
>>> # If max_redirects exceeded, an exception will be raised
>>> r = get('http://google.com/', max_redirects=1)
Traceback (most recent call last):
  File "<input>", line 1, in <module>
  File "urllib3.py", line 627, in request
    raise Urllib3Exception('max_redirects exceeded')
Urllib3Exception: max_redirects exceeded
```

2.2 Reference

class `urllib3.Response` (*r*, ***kwargs*)

A Response object.

```
>>> import urllib3
>>> response = urllib3.get("http://docs.python.org/")
>>> response.total_time
0.033042049407959
>>> response.status, response.reason, response.version
(200, 'OK', 10)
>>> type(response.body), len(response.body)
(<type 'str'>, 8719)
>>> type(response.text), len(response.text)
(<type 'unicode'>, 8719)
>>> response.getheader('server')
'Apache/2.2.16 (Debian)'
>>> response.getheaders()
[
    ('content-length', '8719'),
    ('x-cache', 'MISS from localhost'),
    ('accept-ranges', 'bytes'),
    ('vary', 'Accept-Encoding'),
    ('server', 'Apache/2.2.16 (Debian)'),
    ('last-modified', 'Tue, 26 Jun 2012 19:23:18 GMT'),
    ('connection', 'close'),
    ('etag', '"13cc5e4-220f-4c36507ded580"'),
    ('date', 'Wed, 27 Jun 2012 06:50:30 GMT'),
    ('content-type', 'text/html'),
    ('x-cache-lookup', 'MISS from localhost:8080')
]
>>> response.headers
{
    'content-length': '8719',
    'x-cache': 'MISS from localhost',
    'accept-ranges': 'bytes',
    'vary': 'Accept-Encoding',
    'server': 'Apache/2.2.16 (Debian)',
    'last-modified': 'Tue, 26 Jun 2012 19:23:18 GMT',
    'connection': 'close',
    'etag': '"13cc5e4-220f-4c36507ded580"',
    'date': 'Wed, 27 Jun 2012 06:50:30 GMT',
    'content-type': 'text/html',
    'x-cache-lookup': 'MISS from localhost:8080'
}
```

body

A property that is only computed once per instance and then replaces itself with an ordinary attribute. Deleting the attribute resets the property.

close()

Close the connection

content

A property that is only computed once per instance and then replaces itself with an ordinary attribute. Deleting the attribute resets the property.

cookies

A property that is only computed once per instance and then replaces itself with an ordinary attribute.

Deleting the attribute resets the property.

cookiestring

A property that is only computed once per instance and then replaces itself with an ordinary attribute.

Deleting the attribute resets the property.

classmethod from_httplib (*connection*, ***kwargs*)

Generate a `Response` object from a `httplib` response object.

headers

A property that is only computed once per instance and then replaces itself with an ordinary attribute.

Deleting the attribute resets the property.

json

A property that is only computed once per instance and then replaces itself with an ordinary attribute.

Deleting the attribute resets the property.

links

A property that is only computed once per instance and then replaces itself with an ordinary attribute.

Deleting the attribute resets the property.

next ()

raw_header

A property that is only computed once per instance and then replaces itself with an ordinary attribute.

Deleting the attribute resets the property.

raw_response

A property that is only computed once per instance and then replaces itself with an ordinary attribute.

Deleting the attribute resets the property.

read (*chunk_size=8192*)

read content (for streaming and large files)

`chunk_size`: size of chunk, default: 8192

reason = None

Reason phrase returned by server.

status = None

Status code returned by server.

status_code = None

An alias of `status`.

text

A property that is only computed once per instance and then replaces itself with an ordinary attribute.

Deleting the attribute resets the property.

total_time = None

total time

version = None

HTTP protocol version used by server. 10 for HTTP/1.0, 11 for HTTP/1.1.

class urlfetch.Session (*headers={}, cookies={}, auth=None*)

A session object.

`urlfetch.Session` can hold common headers and cookies. Every request issued by a `urlfetch.Session` object will bring u these headers and cookies.

`urlfetch.Session` plays a role in handling cookies, just like a `cookiejar`.

Parameters

- **headers** (*dict, optional*) – init headers
- **cookies** (*dict, optional*) – init cookies
- **auth** (*tuple, optional*) – (username, password) for basic authentication

cookies

cookiesstring

delete (**args, **kwargs*)
Issue a delete request

fetch (**args, **kwargs*)
Fetch an URL

get (**args, **kwargs*)
Issue a get request

head (**args, **kwargs*)
Issue a head request

headers

options (**args, **kwargs*)
Issue a options request

patch (**args, **kwargs*)
Issue a patch request

popcookie (*key*)
Remove an cookie from default cookies

popheader (*header*)
Remove an header from default headers

post (**args, **kwargs*)
Issue a post request

put (**args, **kwargs*)
Issue a put request

putcookie (*key, value=''*)
Add an cookie to default cookies

putheader (*header, value*)
Add an header to default headers

request (**args, **kwargs*)
Issue a request

snapshot ()

trace (**args, **kwargs*)
Issue a trace request

`urllib3.request` (*url, method='GET', params=None, data=None, headers={}, timeout=None, files={},
randua=False, auth=None, length_limit=None, proxies=None, trust_env=True,
max_redirects=0, **kwargs*)
request an URL

Parameters

- **url** – URL to be fetched.

- **method** – (optional) HTTP method, one of GET, DELETE, HEAD, OPTIONS, PUT, POST, TRACE, PATCH. GET by default.
- **params** – (optional) dict or string to attach to url as querystring.
- **headers** – (optional) HTTP request headers in dict
- **timeout** – (optional) timeout in seconds
- **files** – (optional) files to be sended
- **randua** – (optional) if True or path string, use a random user-agent in headers, instead of 'urlfetch/' + `__version__`
- **auth** – (optional) (username, password) for basic authentication
- **length_limit** – (optional) if None, no limits on content length, if the limit reached raised exception 'Content length is more than ...'
- **proxies** – (optional) HTTP proxy, like { 'http': '127.0.0.1:8888', 'https': '127.0.0.1:563' }
- **trust_env** – (optional) If True, urlfetch will get infomations from env, such as HTTP_PROXY, HTTPS_PROXY
- **max_redirects** – (integer, optional) Max redirects allowed within a request. Default is 0, which means redirects are not allowed.

Return type A Response object

`urlfetch.fetch(*args, **kwargs)`
fetch an URL.

`fetch()` is a wrapper of `request()`. It calls `get()` by default. If one of parameter `data` or parameter `files` is supplied, `post()` is called.

`urlfetch.get(url, params=None, data=None, headers={}, timeout=None, files={}, randua=False, auth=None, length_limit=None, proxies=None, trust_env=True, max_redirects=0, **kwargs)`
Issue a GET request

`urlfetch.post(url, params=None, data=None, headers={}, timeout=None, files={}, randua=False, auth=None, length_limit=None, proxies=None, trust_env=True, max_redirects=0, **kwargs)`
Issue a POST request

`urlfetch.head(url, params=None, data=None, headers={}, timeout=None, files={}, randua=False, auth=None, length_limit=None, proxies=None, trust_env=True, max_redirects=0, **kwargs)`
Issue a HEAD request

`urlfetch.put(url, params=None, data=None, headers={}, timeout=None, files={}, randua=False, auth=None, length_limit=None, proxies=None, trust_env=True, max_redirects=0, **kwargs)`
Issue a PUT request

`urlfetch.delete(url, params=None, data=None, headers={}, timeout=None, files={}, randua=False, auth=None, length_limit=None, proxies=None, trust_env=True, max_redirects=0, **kwargs)`
Issue a DELETE request

`urlfetch.options(url, params=None, data=None, headers={}, timeout=None, files={}, randua=False, auth=None, length_limit=None, proxies=None, trust_env=True, max_redirects=0, **kwargs)`
Issue a OPTIONS request

```
urlfetch.trace(url, params=None, data=None, headers={}, timeout=None, files={}, randua=False,
               auth=None, length_limit=None, proxies=None, trust_env=True, max_redirects=0,
               **kwargs)
```

Issue a TRACE request

```
urlfetch.patch(url, params=None, data=None, headers={}, timeout=None, files={}, randua=False,
               auth=None, length_limit=None, proxies=None, trust_env=True, max_redirects=0,
               **kwargs)
```

Issue a PATCH request

2.2.1 helpers

```
urlfetch.decode_gzip(data)
```

decode gzipped content

```
urlfetch.decode_deflate(data)
```

decode deflate content

```
urlfetch.parse_url(url)
```

returns dictionary of parsed url: scheme, netloc, path, params, query, fragment, uri, username, password, host and port

```
urlfetch.get_proxies_from_environ()
```

get proxies from os.environ

```
urlfetch.mb_code(s, coding=None, errors='replace')
```

encoding/decoding helper

```
urlfetch.sc2cs(sc)
```

Convert Set-Cookie header to cookie string.

Set-Cookie can be retrieved from a Response instance:

```
sc = response.getheader('Set-Cookie')
```

Parameters `sc` – (string) Set-Cookie

Return type cookie string, which is name=value pairs joined by ;.

```
urlfetch.random_useragent(filename=None, *filenames)
```

Returns a User-Agent string randomly from file.

```
>>> ua = random_useragent('file1')
>>> ua = random_useragent('file1', 'file2')
>>> ua = random_useragent(['file1', 'file2'])
>>> ua = random_useragent(['file1', 'file2'], 'file3')
```

Parameters `filename` (*string, optional*) – path to the file from which a random useragent is generated

```
urlfetch.import_object(name)
```

Imports an object by name.

`import_object('x.y.z')` is equivalent to `'from x.y import z'`.

```
>>> import_object('os.path') is os.path
True
>>> import_object('os.path.dirname') is os.path.dirname
True
```

`urllib3.url_concat(url, args, keep_existing=True)`

Concatenate url and argument dictionary

```
>>> url_concat("http://example.com/foo?a=b", dict(c="d"))
'http://example.com/foo?a=b&c=d'
```

Parameters

- **url** – (string) url being concat to.
- **args** – (dict) args being concat.
- **keep_existing** – (bool, optional) Whether to keep the args which are already in url, default is True.

`urllib3.choose_boundary()`

Generate a multipart boundary.

Return type string

`urllib3.encode_multipart(data, files)`

Encode multipart.

Parameters

- **data** – (dict) data to be encoded
- **files** – (dict) files to be encoded

Return type encoded binary string

2.3 Changelog

Time flies!!

2.3.1 0.6.2 (2014-03-22)

Fix:

- Http request's host header should include the port. Using `netloc` as the http host header is wrong, it could include `user:pass`.

2.3.2 0.6.1 (2014-03-15)

Fix:

- Parsing links: If `Link` header is empty, `[]` should be returned, not `[{'url': ''}]`.

2.3.3 0.6 (2013-08-26)

Change:

- Remove lazy response introduced in 0.5.6
- Remove the `dump`, `dumps`, `load` and `loads` methods of `urllib3.Response`

2.3.4 0.5.7 (2013-07-08)

Fix:

- Host header field should include host and port

2.3.5 0.5.6 (2013-07-04)

Feature:

- Lay response. Read response when you need it.

2.3.6 0.5.5 (2013-06-07)

Fix:

- fix docstring.
- `parse_url` raise exception for `http://foo.com/`

2.3.7 0.5.4.2 (2013-03-31)

Feature:

- `urllib3.Response.link`, links parsed from HTTP Link header.

Fix:

- Scheme doesn't correspond to the new location when following redirects.

2.3.8 0.5.4.1 (2013-03-05)

Fix:

- `urllib3.random_useragent()` raises exception `[Errno 2] No such file or directory`.
- `urllib3.encode_multipart()` doesn't use *isinstance: (object, class-or-type-or-tuple)* correctly.

2.3.9 0.5.4 (2013-02-28)

Feature:

- HTTP Proxy-Authorization.

Fix:

- Fix docstring typos.
- `urllib3.encode_multipart()` should behave the same as `urllib.urlencode(query, doseq=1)`.
- `urllib3.parse_url()` should parse urls like they are HTTP urls.

2.3.10 0.5.3.1 (2013-02-01)

Fix:

- `urlfetch.Response.content` becomes empty after the first access.

2.3.11 0.5.3 (2013-02-01)

Feature:

- NEW `urlfetch.Response.status_code`, alias of `urlfetch.Response.status`.
- NEW `urlfetch.Response.total_time`, `urlfetch.Response.raw_header` and `urlfetch.Response.raw_response`.
- Several properties of `urlfetch.Response` are cached to avoid unnecessary calls, including `urlfetch.Response.text`, `urlfetch.Response.json`, `urlfetch.Response.headers`, `urlfetch.Response.cookies`, `urlfetch.Response.cookiestring`, `urlfetch.Response.raw_header` and `urlfetch.Response.raw_response`.

Fix:

- `urlfetch.mb_code()` may silently return incorrect result, since the encode errors are replaced, it should be decode properly and then encode without replace.

2.3.12 0.5.2 (2012-12-24)

Feature:

- `random_useragent()` can accept list/tuple/set params and can accept more than one params which specify the paths to check and read from. Below are some examples:

```
>>> ua = random_useragent('file1')
>>> ua = random_useragent('file1', 'file2')
>>> ua = random_useragent(['file1', 'file2'])
>>> ua = random_useragent(['file1', 'file2'], 'file3')
```

Fix:

- Possible infinite loop in `random_useragent()`.

2.3.13 0.5.1 (2012-12-05)

Fix:

- In some platforms `urlfetch.useragents.list` located in wrong place.
- `random_useragent()` will never return the first line.
- Typo in the description of `urlfetch.useragents.list` (the first line).

2.3.14 0.5.0 (2012-08-23)

- Redirects support. Parameter `max_redirects` specify the max redirects allowed within a request. Default is 0, which means redirects are not allowed.
- Code cleanups

2.3.15 0.4.3 (2012-08-17)

- Add `params` parameter, `params` is dict or string to attach to request url as querystring.
- Gzip and deflate support.

2.3.16 0.4.2 (2012-07-31)

- HTTP(S) proxies support.

2.3.17 0.4.1 (2012-07-04)

- Streaming support.

2.3.18 0.4.0 (2012-07-01)

- NEW `urllib3.Session` to manipulate cookies automatically, share common request headers and cookies.
- NEW `urllib3.Response.cookies` and `urllib3.Response.cookiestring` to get response cookie dict and cookie string.

2.3.19 0.3.6 (2012-06-08)

- Simplify code
- Trace method without data and files, according to RFC2612
- `urlencode(data, 1)` so that `urlencode({'param': [1, 2, 3]})` => `'param=1¶m=2¶m=3'`

2.3.20 0.3.5 (2012-04-24)

- Support specifying an IP for the request host, useful for testing API.

2.3.21 0.3.0 (2012-02-28)

- Python 3 compatible

2.3.22 0.2.2 (2012-02-22)

- Fix bug: file upload: file should always have a filename

2.3.23 0.2.1 (2012-02-22)

- More flexible file upload
- Rename `fetch2` to `request`
- Add `auth` parameter, instead of put basic authentication info in url

2.3.24 0.1.2 (2011-12-07)

- Support basic auth

2.3.25 0.1 (2011-12-02)

- First release

2.4 Contributors

- Andrey Usov <<https://github.com/ownport>>
- Liu Qishuai <<https://github.com/lqs>>
- wangking <<https://github.com/wangking>>

License

Code and documentation are available according to the BSD 2-clause License:

Copyright (c) 2012-2013, Yue Du
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

U

`urlfetch` (*Unix, Windows*), ??