

:mod:`http` --- HTTP modules

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)http.rst, line 1); [backlink](#)

Unknown interpreted text role "mod".

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Unknown directive type "module".

```
.. module:: http
   :synopsis: HTTP status codes and messages
```

Source code: :source:`Lib/http/__init__.py`

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Unknown interpreted text role "source".

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Unknown directive type "index".

```
.. index::
   pair: HTTP; protocol
   single: HTTP; http (standard module)
```

:mod:`http` is a package that collects several modules for working with the HyperText Transfer Protocol:

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Unknown interpreted text role "mod".

- :mod:`http.client` is a low-level HTTP protocol client; for high-level URL opening use :mod:`urllib.request`

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Unknown interpreted text role "mod".

- :mod:`http.server` contains basic HTTP server classes based on :mod:`socketserver`

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[backlink](#)

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- `mod:'http.cookies'` has utilities for implementing state management with cookies

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[backlink](#)

Unknown interpreted text role "mod".

- `mod:'http.cookiejar'` provides persistence of cookies

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[backlink](#)

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`mod:'http'` is also a module that defines a number of HTTP status codes and associated messages through the `class:'http.HTTPStatus'` enum:

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Unknown interpreted text role "mod".

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Unknown interpreted text role "class".

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Unknown directive type "versionadded".

```
.. versionadded:: 3.5
```

A subclass of `class:'enum.IntEnum'` that defines a set of HTTP status codes, reason phrases and long descriptions written in English.

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Unknown interpreted text role "class".

Usage:

```
>>> from http import HTTPStatus
>>> HTTPStatus.OK
HTTPStatus.OK
>>> HTTPStatus.OK == 200
True
>>> HTTPStatus.OK.value
200
>>> HTTPStatus.OK.phrase
'OK'
>>> HTTPStatus.OK.description
'Request fulfilled, document follows'
>>> list(HTTPStatus)
[HTTPStatus.CONTINUE, HTTPStatus.SWITCHING_PROTOCOLS, ...]
```

HTTP status codes

Supported, [IANA-registered](#) status codes available in `class:'http.HTTPStatus'` are:

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Unknown interpreted text role "class".

Code	Enum Name	Details
100	CONTINUE	HTTP/1.1 RFC 7231 , Section 6.2.1
101	SWITCHING_PROTOCOLS	HTTP/1.1 RFC 7231 , Section 6.2.2
102	PROCESSING	WebDAV RFC 2518 , Section 10.1
103	EARLY_HINTS	An HTTP Status Code for Indicating Hints RFC 8297
200	OK	HTTP/1.1 RFC 7231 , Section 6.3.1
201	CREATED	HTTP/1.1 RFC 7231 , Section 6.3.2
202	ACCEPTED	HTTP/1.1 RFC 7231 , Section 6.3.3
203	NON_AUTHORITATIVE_INFORMATION	HTTP/1.1 RFC 7231 , Section 6.3.4
204	NO_CONTENT	HTTP/1.1 RFC 7231 , Section 6.3.5
205	RESET_CONTENT	HTTP/1.1 RFC 7231 , Section 6.3.6
206	PARTIAL_CONTENT	HTTP/1.1 RFC 7233 , Section 4.1
207	MULTI_STATUS	WebDAV RFC 4918 , Section 11.1
208	ALREADY_REPORTED	WebDAV Binding Extensions RFC 5842 , Section 7.1 (Experimental)
226	IM_USED	Delta Encoding in HTTP RFC 3229 , Section 10.4.1
300	MULTIPLE_CHOICES	HTTP/1.1 RFC 7231 , Section 6.4.1
301	MOVED_PERMANENTLY	HTTP/1.1 RFC 7231 , Section 6.4.2
302	FOUND	HTTP/1.1 RFC 7231 , Section 6.4.3
303	SEE_OTHER	HTTP/1.1 RFC 7231 , Section 6.4.4
304	NOT_MODIFIED	HTTP/1.1 RFC 7232 , Section 4.1
305	USE_PROXY	HTTP/1.1 RFC 7231 , Section 6.4.5
307	TEMPORARY_REDIRECT	HTTP/1.1 RFC 7231 , Section 6.4.7
308	PERMANENT_REDIRECT	Permanent Redirect RFC 7238 , Section 3 (Experimental)
400	BAD_REQUEST	HTTP/1.1 RFC 7231 , Section 6.5.1
401	UNAUTHORIZED	HTTP/1.1 Authentication RFC 7235 , Section 3.1
402	PAYMENT_REQUIRED	HTTP/1.1 RFC 7231 , Section 6.5.2
403	FORBIDDEN	HTTP/1.1 RFC 7231 , Section 6.5.3
404	NOT_FOUND	HTTP/1.1 RFC 7231 , Section 6.5.4
405	METHOD_NOT_ALLOWED	HTTP/1.1 RFC 7231 , Section 6.5.5
406	NOT_ACCEPTABLE	HTTP/1.1 RFC 7231 , Section 6.5.6
407	PROXY_AUTHENTICATION_REQUIRED	HTTP/1.1 Authentication RFC 7235 , Section 3.2
408	REQUEST_TIMEOUT	HTTP/1.1 RFC 7231 , Section 6.5.7
409	CONFLICT	HTTP/1.1 RFC 7231 , Section 6.5.8
410	GONE	HTTP/1.1 RFC 7231 , Section 6.5.9
411	LENGTH_REQUIRED	HTTP/1.1 RFC 7231 , Section 6.5.10
412	PRECONDITION_FAILED	HTTP/1.1 RFC 7232 , Section 4.2
413	REQUEST_ENTITY_TOO_LARGE	HTTP/1.1 RFC 7231 , Section 6.5.11
414	REQUEST_URI_TOO_LONG	HTTP/1.1 RFC 7231 , Section 6.5.12
415	UNSUPPORTED_MEDIA_TYPE	HTTP/1.1 RFC 7231 , Section 6.5.13
416	REQUESTED_RANGE_NOT_SATISFIABLE	HTTP/1.1 Range Requests RFC 7233 , Section 4.4
417	EXPECTATION_FAILED	HTTP/1.1 RFC 7231 , Section 6.5.14
418	IM_A_TEAPOT	HTCPCP/1.0 RFC 2324 , Section 2.3.2
421	MISDIRECTED_REQUEST	HTTP/2 RFC 7540 , Section 9.1.2
422	UNPROCESSABLE_ENTITY	WebDAV RFC 4918 , Section 11.2
423	LOCKED	WebDAV RFC 4918 , Section 11.3
424	FAILED_DEPENDENCY	WebDAV RFC 4918 , Section 11.4
425	TOO_EARLY	Using Early Data in HTTP RFC 8470
426	UPGRADE_REQUIRED	HTTP/1.1 RFC 7231 , Section 6.5.15
428	PRECONDITION_REQUIRED	Additional HTTP Status Codes RFC 6585
429	TOO_MANY_REQUESTS	Additional HTTP Status Codes RFC 6585
431	REQUEST_HEADER_FIELDS_TOO_LARGE	Additional HTTP Status Codes RFC 6585
451	UNAVAILABLE_FOR_LEGAL_REASONS	An HTTP Status Code to Report Legal Obstacles RFC 7725
500	INTERNAL_SERVER_ERROR	HTTP/1.1 RFC 7231 , Section 6.6.1
501	NOT_IMPLEMENTED	HTTP/1.1 RFC 7231 , Section 6.6.2
502	BAD_GATEWAY	HTTP/1.1 RFC 7231 , Section 6.6.3
503	SERVICE_UNAVAILABLE	HTTP/1.1 RFC 7231 , Section 6.6.4
504	GATEWAY_TIMEOUT	HTTP/1.1 RFC 7231 , Section 6.6.5

Code	Enum Name	Details
505	HTTP_VERSION_NOT_SUPPORTED	HTTP/1.1 RFC 7231 , Section 6.6.6
506	VARIANT_ALSO_NEGOTIATES	Transparent Content Negotiation in HTTP RFC 2295 , Section 8.1 (Experimental)
507	INSUFFICIENT_STORAGE	WebDAV RFC 4918 , Section 11.5
508	LOOP_DETECTED	WebDAV Binding Extensions RFC 5842 , Section 7.2 (Experimental)
510	NOT_EXTENDED	An HTTP Extension Framework RFC 2774 , Section 7 (Experimental)
511	NETWORK_AUTHENTICATION_REQUIRED	Additional HTTP Status Codes RFC 6585 , Section 6

In order to preserve backwards compatibility, enum values are also present in the `mod:'http.client'` module in the form of constants. The enum name is equal to the constant name (i.e. `http.HTTPStatus.OK` is also available as `http.client.OK`).

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Unknown interpreted text role "mod".

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Unknown directive type "versionchanged".

```
.. versionchanged:: 3.7
   Added ``421 MISDIRECTED_REQUEST`` status code.
```

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Unknown directive type "versionadded".

```
.. versionadded:: 3.8
   Added ``451 UNAVAILABLE_FOR_LEGAL_REASONS`` status code.
```

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Unknown directive type "versionadded".

```
.. versionadded:: 3.9
   Added ``103 EARLY_HINTS``, ``418 IM_A_TEAPOT`` and ``425 TOO_EARLY`` status codes.
```