:mod:`http.cookiejar` --- Cookie handling for HTTP clients

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 1); backlink Unknown interpreted text role "mod".

 $System\ Message: ERROR/3\ (D:\onboarding-resources\sample-onboarding-resources\cpython-main\coolibrary\cookiejar.rst,\ line\ 4)$

Unknown directive type "module".

.. module:: http.cookiejar :synopsis: Classes for automatic handling of HTTP cookies.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 7)

Unknown directive type "moduleauthor".

.. moduleauthor:: John J. Lee <jjl@pobox.com>

 $System \, Message: ERROR/3 \, (\cite{D}: \cite{D}: \cite$

Unknown directive type "sectionauthor".

.. sectionauthor:: John J. Lee <jjl@pobox.com>

Source code: :source: Lib/http/cookiejar.py

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 10); backlink

Unknown interpreted text role "source".

The mod: http.cookicjar' module defines classes for automatic handling of HTTP cookies. It is useful for accessing web sites that require small pieces of data -- xdfir' cookies' -- to be set on the client machine by an HTTP response from a web server, and then returned to the server in later HTTP requests.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 14); backlink

Unknown interpreted text role "mod".

 $System Message: ERROR/3 \ (D:\onboarding-resources\ sample-onboarding-resources\ cpython main\ Doc\library\ [cpython-main]\ [Doc]\ [library]\ http.\ cookiejar.rst,\ line\ 14); \\ backlink$

Unknown interpreted text role "dfn".

Both the regular Netscape cookie protocol and the protocol defined by RFC 2965 are handled. RFC 2965 handling is switched off by default. RFC 2109 cookies are parsed as Netscape cookies and subsequently treated either as Netscape or RFC 2965 cookies according to the 'policy' in effect. Note that the great majority of cookies on the internet are Netscape cookies. mod: http.cookiejar' attempts to follow the de-facto Netscape cookie protocol (which differs substantially from that set out in the original Netscape specification), including taking note of the max-age and port cookie-attributes introduced with RFC 2965.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 19); backlink

Unknown interpreted text role "mod".

Note

The various named parameters found in mailheader: Set-Cookie' and mailheader: Set-Cookie2' headers (eg. domain and expires) are conventionally referred to as xdfin' attributes'. To distinguish them from Python attributes, the documentation for this module uses the term xdfin' cookie-attribute' instead.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 31); backlink

Unknown interpreted text role "mailheader".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc] [library]http.cookiejar.rst, line 31); backlink

Unknown interpreted text role "mailheader".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 31); backlink

Unknown interpreted text role "dfn".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 31); backlink

Unknown interpreted text role "dfn".

The module defines the following exception:

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 41)

Unknown directive type "exception".

.. exception:: LoadError

Instances of :class:`FileCookieJar` raise this exception on failure to load cookies from a file. :exc:`LoadError` is a subclass of :exc:`OSError`.

. versionchanged:: 3.3

LoadError was made a subclass of :exc:`OSError` instead of :exc:`IOError`.

The following classes are provided:

policy is an object implementing the :class: 'CookiePolicy' interface.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 56); backlink
Unknown interpreted text role "class".

The class: CookieJar' class stores HTTP cookies. It extracts cookies from HTTP requests, and returns them in HTTP responses. class: CookieJar' instances automatically expire contained cookies when necessary. Subclasses are also responsible for storing and retrieving cookies from a file or database.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 58); backlink

Unknown interpreted text role "class".

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 58); backlink
Unknown interpreted text role "class".

policy is an object implementing the class: CookiePolicy' interface. For the other arguments, see the documentation for the corresponding attributes.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython mainlpoc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 66); bucklink

Unknown interpreted text role "class".

A x-lass; Cookie-Jar' which can load cookies from, and perhaps save cookies to, a file on disk. Cookies are **NOT** loaded from the named file until either the meth; load' or meth; revert' method is called. Subclasses of this class are documented in section ref; file-cookie-jar-classes'.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 69); backlink

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 69); backlink

Unknown interpreted text role "meth".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 69); backlink

Unknown interpreted text role "meth".

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 69); backlink

Unknown interpreted text role "ref".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main|Doc\library|fopthon-main|Doc|[library]http.cookiejar.rst, line 74)

Unknown directive type "versionchanged".

.. versionchanged:: 3.8

The filename parameter supports a :term:`path-like object`.

 $This \ class \ is \ responsible \ for \ deciding \ whether \ each \ cookie \ should \ be \ accepted \ from/\ returned \ to \ the \ server.$

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 85)

Invalid class attribute value for "class" directive: "DefaultCookiePolicy(blocked_domains=None, allowed_domains=None, netscape=True, rfc2965=False, rfc2109_as_netscape=None, hide_cookie2=False, strict_domain=False, strict_fc2965_unverifiable=True, strict_ns_unverifiable=False, strict_ns_domain=DefaultCookiePolicy.DomainLiberal, strict_ns_set_initial_dollar=False, strict_ns_set_path=False, secure_protocols=("https", "wss"))".

.. class:: DefaultCookiePolicy(blocked_domains=None, allowed_domains=None, netscape=True, rfc2965=False, rfc2109_as_netscape=None,

Constructor arguments should be passed as keyword arguments only.

blocked_domains is a sequence of domain names that we never accept cookies from, nor return cookies to. *allowed_domains* if not :const: None, this is a sequence of the only domains for which we accept and return cookies.

secure_protocols is a sequence of protocols for which secure cookies can be added to. By default *https* and *wss* (secure websocket) are considered secure protocols. For all other arguments, see the documentation for :class: CookiePolicy` and :class: DefaultCookiePolicy` objects.

:class:`DefaultCookiePolicy` implements the standard accept / reject rules for Netscape and :rfc:`2965` cookies. By default, :rfc:`2109` cookies (ie. cookies received in a :mailheader: Set-Cookie` header with a version cookie-attribute of 1) are treated according to the RFC 2965 rules. However, if RFC 2965 handling is turned off or :attr:`rfc2109 as netscape` is ``True`', RFC 2109 cookies are 'downgraded' by the :class:`CookieJar' instance to Netscape cookies, by setting the :attr:`version` attribute of the :class:`Cookie` instance to 0. :class:`DefaultCookiePolicy` also provides some parameters to allow some fine-tuning of policy.

This class represents Netscape, RFC 2109 and RFC 2965 cookies. It is not expected that users of mod: http.cookiejar' construct their own class: Cookie' instances. Instead, if necessary, call meth: make_cookies' on a class: CookieJar' instance.

main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 109); backlink Unknown interpreted text role "mod".

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 109); backlink
Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 109); backlink
Unknown interpreted text role "meth".

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 109); backlink
Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 115)

Unknown directive type "seealso".

```
.. seealso::

Module :mod:`urllib.request`
   URL opening with automatic cookie handling.

Module :mod:`http.cookies`
   HTTP cookie classes, principally useful for server-side code. The :mod:`http.cookiejar` and :mod:`http.cookies` modules do not depend on each other.

https://curl.se/rfc/cookie_spec.html
   The specification of the original Netscape cookie protocol. Though this is still the dominant protocol, the 'Netscape cookie protocol' implemented by all the major browsers (and :mod:`http.cookiejar`) only bears a passing resemblance the one sketched out in ``cookie_spec.html``.

:rfc:`2109` - HTTP State Management Mechanism
   Obsoleted by :rfc: '2965`. Uses :mailheader:`Set-Cookie` with version=1.

:rfc:`2965` - HTTP State Management Mechanism
   The Netscape protocol with the bugs fixed. Uses :mailheader:`Set-Cookie2` in place of :mailheader:`Set-Cookie`. Not widely used.

http://kristol.org/cookie/errata.html
   Unfinished errata to :rfc: '2965`.

:rfc: '2964` - Use of HTTP State Management
```

CookieJar and FileCookieJar Objects

:class: 'CookieJar' objects support the :term' iterator' protocol for iterating over contained :class: 'Cookie' objects.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 148); backlink
Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 148); backlink

Unknown interpreted text role "term".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 148); backlink
Unknown interpreted text role "class".

:class:`CookieJar` has the following methods:

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 151); backlink
Unknown interpreted text role "class".

 $System \, Message: ERROR/3 \, (\cite{Description} in \cite{Description} library \cite{Description} lib$

```
main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 154)
Unknown directive type "method".

.. method:: CookieJar.add_cookie_header(request)

Add correct :mailheader: `Cookie` header to *request*.

If policy allows (ie. the :attr: `rfc2965` and :attr: `hide_cookie2` attributes of the :class: `CookieJar' 's :class: `CookiePolicy` instance are true and false respectively), the :mailheader: `CookiePolicy` header is also added when appropriate.

The *request* object (usually a :class: `urllib.request.Request` instance) must support the methods :meth: 'get full_url', 'meth: 'get host', :meth: 'get_type', :meth: 'unverifiable', :meth: has header', :meth: 'get header', :meth: header items', :meth: 'add unredirected_header' and :attr: `origin_req host ` attribute as documented by :mod: `urllib.request'.

.. versionchanged:: 3.3

*request* object needs :attr: `origin_req host ` attribute. Dependency on a deprecated method :meth: `get_origin_req_host ` has been removed.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 175)

Unknown directive type "method".

```
.. method:: CookieJar.extract_cookies(response, request)

Extract cookies from HTTP *response* and store them in the :class:`CookieJar`,
where allowed by policy.
```

The :class:`CookieJar` will look for allowable :mailheader:`Set-Cookie` and :mailheader:`Set-Cookie` headers in the *response* argument, and store cookies as appropriate (subject to the :meth:`CookiePolicy.set_ok` method's approval).

The *response* object (usually the result of a call to :meth:`urllib.request.urlopen`, or similar) should support an :meth:`info` method, which returns an :class:`email.message.Message` instance.

The *request* object (usually a :class:`urllib.request.Request` instance) must support the methods :meth:`get full_url`. :meth:`get host', :meth:`unverifiable`, and :attr:`origin_req_host` attribute, as documented by :mod:`urllib.request'. The request is used to set default values for cookie-attributes as well as for checking that the cookie is allowed to be set.

.. versionchanged:: 3.3

request object needs :attr:`origin_req_host` attribute. Dependency on a deprecated method :meth:`get_origin_req_host` has been removed.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 200)

Unknown directive type "method".

.. method:: CookieJar.set_policy(policy)

Set the :class:`CookiePolicy` instance to be used.

 $System\ Message: ERROR/3\ (D:\onboarding-resources\sumple-onboarding-resources\cpython-main\coolibrary\cookiejar.rst,\ line\cookiejar.rst,\ line\cookiejar$

Unknown directive type "method".

.. method:: CookieJar.make cookies(response, request)

Return sequence of :class:`Cookie` objects extracted from *response* object.

See the documentation for :meth:`extract_cookies` for the interfaces required of the *response* and *request* arguments.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 213)

Unknown directive type "method".

.. method:: CookieJar.set_cookie_if_ok(cookie, request)

Set a :class:`Cookie` if policy says it's OK to do so.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 218)

Unknown directive type "method".

.. method:: CookieJar.set_cookie(cookie)

Set a :class:`Cookie`, without checking with policy to see whether or not it should be set.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 224)

Unknown directive type "method".

.. method:: CookieJar.clear([domain[, path[, name]]])

Clear some cookies.

If invoked without arguments, clear all cookies. If given a single argument, only cookies belonging to that *domain* will be removed. If given two arguments, cookies belonging to the specified *domain* and URL *path* are removed. If given three arguments, then the cookie with the specified *domain*, *path* and *name* is removed.

Raises :exc:`KeyError` if no matching cookie exists.

 $System \, Message: ERROR/3 \, (D: \onboarding-resources \ample-onboarding-resources \c) \\ resources \ample-onb$

Unknown directive type "method".

.. method:: CookieJar.clear_session_cookies()

Discard all session cookies.

Discards all contained cookies that have a true :attr:`discard` attribute (usually because they had either no `max-age` or `'expires` cookie-attribute, or an explicit `'discard'` cookie-attribute). For interactive browsers, the end of a session usually corresponds to closing the browser window.

Note that the :meth:`save` method won't save session cookies anyway, unless you ask otherwise by passing a true *ignore_discard* argument.

 $\hbox{$\tt :class:'File Cookie Jar'$ implements the following additional methods:}$

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 249); backlink

Unknown interpreted text role "class".

Unknown directive type 'method'

.. method:: FileCookieJar.save(filename=None, ignore_discard=False, ignore_expires=False)

Save cookies to a file.

This base class raises :exc:`NotImplementedError`. Subclasses may leave this method unimplemented.

filename is the name of file in which to save cookies. If *filename* is not specified, :attr:\self.filename\ is used (whose default is the value passed to the constructor, if any); if :attr:\self.filename\ is :const:\None\, :exc:\ValueError\ is raised.

ignore_discard: save even cookies set to be discarded. *ignore_expires*: save even cookies that have expired

The file is overwritten if it already exists, thus wiping all the cookies it contains. Saved cookies can be restored later using the :meth:`load` or :meth:`revert` methods.

System Message: ERROR/3 (b:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 272)

Unknown directive type "method".

.. method:: FileCookieJar.load(filename=None, ignore_discard=False, ignore_expires=False)

Load cookies from a file.

Old cookies are kept unless overwritten by newly loaded ones.

Arguments are as for :meth: `save`.

The named file must be in the format understood by the class, or :exc:`LoadError` will be raised. Also, :exc:`OSError` may be raised, for example if the file does not exist.

 $System\ Message: ERROR/3\ (D:\onboarding-resources\sample-onboarding-resources\cpython\ main\Doc\library\cpython-main\] [Doc]\ [library\] http.\cookiejar.rst,\ line\ 288)$

Unknown directive type "method".

.. method:: FileCookieJar.revert(filename=None, ignore discard=False, ignore expires=False)

Clear all cookies and reload cookies from a saved file.

:meth:`revert` can raise the same exceptions as :meth:`load`. If there is a failure, the object's state will not be altered.

:class:`FileCookieJar` instances have the following public attributes:

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 295); backlink

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 298)

Unknown directive type "attribute".

.. attribute:: FileCookieJar.filename

Filename of default file in which to keep cookies. This attribute may be assigned to.

 $System \, Message: ERROR/3 \, (D: \onboarding-resources \sample-onboarding-resources \c) \\ resources \c) \\ res$

Unknown directive type "attribute".

.. attribute:: FileCookieJar.delayload

If true, load cookies lazily from disk. This attribute should not be assigned to. This is only a hint, since this only affects performance, not behaviour (unless the cookies on disk are changing). A :class:'CookieJar' object may ignore it. None of the :class:'FileCookieJar' classes included in the standard library lazily loads cookies.

FileCookieJar subclasses and co-operation with web browsers

The following : class: `CookieJar` subclasses are provided for reading and writing.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 318); backlink

Unknown interpreted text role "class".

 $A. {\tt class} : {\tt File Cookie Iar} ` that can load from and save cookies to disk in the Mozilla {\tt cookies}. {\tt txt} file format (which is also used by the Lynx and Netscape browsers).$

Unknown interpreted text role "class".

Note

This loses information about RFC 2965 cookies, and also about newer or non-standard cookie-attributes such as port.

Warning

Back up your cookies before saving if you have cookies whose loss / corruption would be inconvenient (there are some subtleties which may lead to slight changes in the file over a load / save round-trip).

Also note that cookies saved while Mozilla is running will get clobbered by Mozilla.

A xclass: FileCookieJar' that can load from and save cookies to disk in format compatible with the libwww-perl library's Set-Cookie3 file format. This is convenient if you want to store cookies in a human-readable file.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 344); backlink

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 348)

Unknown directive type "versionchanged".

.. versionchanged:: 3.8

The filename parameter supports a :term: path-like object.

CookiePolicy Objects

Objects implementing the :class:'CookiePolicy' interface have the following methods:

 $System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\cpython-main] [Doc] [library] http.cookiejar.rst, line 357); backlink$

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 361)

Unknown directive type "method".

.. method:: CookiePolicy.set_ok(cookie, request)

Return boolean value indicating whether cookie should be accepted from server.

cookie is a :class:`Cookie` instance. *request* is an object implementing the interface defined by the documentation for :meth:`CookieJar.extract_cookies`.

 $System \, Message: ERROR/3 \, (D: \onboarding-resources \sample-onboarding-resources \c) \\ resources \\ resources \c) \\ resources \\ resources \c) \\ resources \\$

Unknown directive type "method".

.. method:: CookiePolicy.return_ok(cookie, request)

Return boolean value indicating whether cookie should be returned to server.

cookie is a :class:`Cookie` instance. *request* is an object implementing the interface defined by the documentation for :meth:`CookieJar.add_cookie_header`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 379)

Unknown directive type "method".

.. method:: CookiePolicy.domain_return_ok(domain, request)

Return ``False`` if cookies should not be returned, given cookie domain.

This method is an optimization. It removes the need for checking every cookie with a particular domain (which might involve reading many files). Returning true from :meth:'domain_return_ok' and :meth:'path_return_ok' leaves all the work to :meth:'return_ok'.

If :meth: domain_return_ok' returns true for the cookie domain, :meth: path_return_ok' is called for the cookie path. Otherwise, :meth: path_return_ok' and :meth: 'return_ok' are never called for that cookie domain. If :meth: path_return_ok' returns true, :meth: 'return_ok' is called with the :class: 'Cookie' object itself for a full check. Otherwise, :meth: 'return_ok' is never called for that cookie path.

Note that :meth: domain_return_ok' is called for every *cookie* domain, not just for the *request* domain. For example, the function might be called with both '".example.com" and '"www.example.com" if the request domain is '"www.example.com". The same goes for :meth: path_return_ok'.

The *request* argument is as documented for :meth:`return_ok`.

 $System \, Message: ERROR/3 \, (D: \onboarding-resources \ample-onboarding-resources \c) homeomorphisms of the main \c) in the cookiegar.rst, line 403) and the cookiegar.rst, line 403) and the cookiegar.rst, line 403 and th$

Unknown directive type "method".

.. method:: CookiePolicy.path_return_ok(path, request)

Return ``False`` if cookies should not be returned, given cookie path.

See the documentation for :meth: $domain_return_ok$.

In addition to implementing the methods above, implementations of the class: CookiePolicy interface must also supply the following attributes, indicating which protocols should be used, and how. All of these attributes may be assigned to.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 409); backlink

Unknown interpreted text role "class".

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 415)

Unknown directive type "attribute".

.. attribute:: CookiePolicy.netscape

Implement Netscape protocol.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 420)

```
Unknown directive type "attribute".
```

```
.. attribute:: CookiePolicy.rfc2965
Implement :rfc:`2965` protocol.
```

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 425)

Unknown directive type "attribute".

```
.. attribute:: CookiePolicy.hide_cookie2

Don't add :mailheader: 'Cookie2' header to requests (the presence of this header indicates to the server that we understand :rfc: '2965' cookies).
```

The most useful way to define a <code>xclass:'CookiePolicy'</code> class is by subclassing from <code>xclass:'DefaultCookiePolicy'</code> and overriding some or all of the methods above. <code>xclass:'CookiePolicy'</code> itself may be used as a 'null policy' to allow setting and receiving any and all cookies (this is unlikely to be useful).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main|Doc\library\[opthon-main] [Doc] [library|http.cookiejar.rst, line 430); backlink

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 430); backlink

Unknown interpreted text role "class".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 430); backlink

Unknown interpreted text role "class".

DefaultCookiePolicy Objects

Implements the standard rules for accepting and returning cookies.

Both RFC 2965 and Netscape cookies are covered. RFC 2965 handling is switched off by default.

The easiest way to provide your own policy is to override this class and call its methods in your overridden implementations before adding your own additional checks:

```
import http.cookiejar
class MyCookiePolicy(http.cookiejar.DefaultCookiePolicy):
    def set_ok(self, cookie, request):
        if not http.cookiejar.DefaultCookiePolicy.set_ok(self, cookie, request):
            return False
        if i_dont_want_to_store_this_cookie(cookie):
            return False
        return Talse
```

In addition to the features required to implement the class: CookiePolicy interface, this class allows you to block and allow domains from setting and receiving cookies. There are also some strictness switches that allow you to tighten up the rather loose Netscape protocol rules a little bit (at the cost of blocking some benign cookies).

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 459); backlink
Unknown interpreted text role "class"

A domain blocklist and allowlist is provided (both off by default). Only domains not in the blocklist and present in the allowlist (if the allowlist is active) participate in cookie setting and returning. Use the blocked_domains constructor argument, and meth: blocked_domains and meth: set_blocked_domains methods (and the corresponding argument and methods for allowed_domains). If you set an allowlist, you can turn it off again by setting it to 'const.' None'.

 $System Message: ERROR/3 \ (D:\onboarding-resources\ sample-onboarding-resources\ cpython main\ Doc\library\ [cpython-main]\ [Doc]\ [library]\ http.\ cookiejar.rst,\ line\ 465); \ \textit{backlink}$

Unknown interpreted text role "meth".

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 465); backlink
Unknown interpreted text role "meth".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 465); backlink

Unknown interpreted text role "const".

Domains in block or allow lists that do not start with a dot must equal the cookie domain to be matched. For example, "example.com" matches a blocklist entry of "example.com", but "www.example.com" does not. Domains that do start with a dot are matched by more specific domains too. For example, both "www.example.com" and "www.coyote.example.com" match ".example.com" (but "example.com" itself does not). IP addresses are an exception, and must match exactly. For example, if blocked_domains contains "192.168.1.2 and ".168.1.2", 192.168.1.2 is blocked, but 193.168.1.2 is blocked, but

 $\hbox{$:$class:$$'DefaultCookiePolicy'$ implements the following additional methods:}$

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 482); backlink

Unknown interpreted text role "class".

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 485)

Unknown directive type "method".

```
.. method:: DefaultCookiePolicy.blocked_domains()

Return the sequence of blocked domains (as a tuple).
```

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 490)

Unknown directive type "method".

.. method:: DefaultCookiePolicy.set_blocked_domains(blocked_domains)

Set the sequence of blocked domains.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 495)

Unknown directive type "method".

.. method:: DefaultCookiePolicy.is blocked(domain)

Return ''True'' if *domain* is on the blocklist for setting or receiving cookies.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 501)

Unknown directive type "method".

.. method:: DefaultCookiePolicy.allowed_domains()

Return :const:`None`, or the sequence of allowed domains (as a tuple).

 $System \, Message: ERROR/3 \, (p:\onboarding-resources\ample-onboarding-resources\cpython-main\doc\library\cpython-main\doc\library\cookiejar.rst, line 506)$

Unknown directive type "method".

 $.. \ {\tt method::} \ {\tt DefaultCookiePolicy.set_allowed_domains(allowed_domains)}$

Set the sequence of allowed domains, or :const:`None`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 511)

Unknown directive type "method".

.. method:: DefaultCookiePolicy.is not allowed(domain)

Return ``True`` if *domain* is not on the allowlist for setting or receiving cookies.

colass: DefaultCookiePolicy` instances have the following attributes, which are all initialised from the constructor arguments of the same name, and which may all be assigned to.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 516); backlink

Unknown interpreted text role "class".

 $System\ Message: ERROR/3\ (D:\onboarding-resources\ sample-onboarding-resources\ cpython-main\ Doc\ library\ [cpython-main\]\ [Doc\]\ (library\ http.cookiejar.rst, line\ 521)$

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.rfc2109_as_netscape

If true, request that the :class:`CookieJar` instance downgrade :rfc:`2109` cookies (ie. cookies received in a :mailheader: Set-Cookie` header with a version cookie-attribute of 1) to Netscape cookies by setting the version attribute of the :class:`Cookie` instance to 0. The default value is :const:`None', in which case RFC 2109 cookies are downgraded if and only if :rfc:'2965` handling is turned off. Therefore, RFC 2109 cookies are downgraded by default.

General strictness switches:

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 533)

Unknown directive type "attribute".

 $\dots \ \, \mathsf{attribute::} \ \, \mathsf{DefaultCookiePolicy.strict_domain}$

Don't allow sites to set two-component domains with country-code top-level domains like ``.co.uk``, ``.gov.uk``, ``.co.nz``.etc. This is far from perfect and isn't guaranteed to work!

RFC 2965 protocol strictness switches:

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 542)

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.strict_rfc2965_unverifiable

Follow :rfc: '2965' rules on unverifiable transactions (usually, an unverifiable transaction is one resulting from a redirect or a request for an image hosted on another site). If this is false, cookies are *never* blocked on the basis of verifiability

Netscape protocol strictness switches:

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 552)

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.strict_ns_unverifiable

Apply :rfc: 2965 rules on unverifiable transactions even to Netscape cookies.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 557)

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.strict_ns_domain

Flags indicating how strict to be with domain-matching rules for Netscape cookies. See below for acceptable values.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 563)

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.strict ns set initial dollar

Ignore cookies in Set-Cookie: headers that have names starting with ``' \S '``.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 568)

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.strict_ns_set_path

Don't allow setting cookies whose path doesn't path-match request URI.

attr'strict_ns_domain' is a collection of flags. Its value is constructed by or-ing together (for example, DomainStrictNoDots|DomainStrictNonDomain means both flags are set).

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 572); backlink

Unknown interpreted text role "attr".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 577)

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.DomainStrictNoDots

When setting cookies, the 'host prefix' must not contain a dot (eg. ``www.foo.bar.com`` can't set a cookie for ``.bar.com``, because ``www.foo`` contains a dot).

 $System \, Message: ERROR/3 \, (p:\onboarding-resources\ample-onboarding-resources\cpython-main\doc\library\cpython-main] [Doc] [library] http.cookiejar.rst, line 584)$

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.DomainStrictNonDomain

Cookies that did not explicitly specify a ``domain`` cookie-attribute can only be returned to a domain equal to the domain that set the cookie (eg. ``spam.example.com`` won't be returned cookies from ``example.com`` that had no ``domain`` cookie-attribute).

 $System Message: ERROR/3 \ (D:\onboarding-resources\ sample-onboarding-resources\ cpython-main\ Doc\ library\ [cpython-main] \ [Doc] \ [library\] ttp.\ cookiejar.rst, line 592)$

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.DomainRFC2965Match

When setting cookies, require a full :rfc:`2965` domain-match.

The following attributes are provided for convenience, and are the most useful combinations of the above flags:

System Message: ERROR/3 (b:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 600)

Unknown directive type "attribute".

 $\dots \ \, {\tt attribute::} \ \, {\tt DefaultCookiePolicy.DomainLiberal}$

Equivalent to 0 (ie. all of the above Netscape domain strictness flags switched off).

 $System Message: ERROR/3 \ (\cite{Description} in \cite{Description} library \ (\cite{Description} elberary) \ (\cite{Descrip$

Unknown directive type "attribute".

.. attribute:: DefaultCookiePolicy.DomainStrict

Equivalent to ``DomainStrictNoDots|DomainStrictNonDomain``.

Cookie Objects

class: Cookie' instances have Python attributes roughly corresponding to the standard cookie-attributes specified in the various cookie standards. The correspondence is not one-to-one, because there are complicated rules for assigning default values, because the max-age and expires cookie-attributes contain equivalent information, and because RFC 2109 cookies may be 'downgraded' by mod' http.cookiejar' from version 1 to version 0 (Netscape) cookies.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 614); backlink

Unknown interpreted text role "class".

 $System Message: ERROR/3 (D:\onboarding-resources\sumple-onboarding-resources\cpython-main\cpyt$

Unknown interpreted text role "mod".

Assignment to these attributes should not be necessary other than in rare circumstances in a <code>xclass:'CookiePolicy'</code> method. The class does not enforce internal consistency, so you should know what you're doing if you do that.

 $System Message: ERROR/3 (b:\onboarding-resources\sumple-onboarding-resources\cpython-main\Doc\library\cpython-main] [Doc] [library]http.cookiejar.rst, line 622); \\bucklink$

Unknown interpreted text role "class".

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 627)

Unknown directive type "attribute".

attribute. Cookie version

Integer or :const: `None`. Netscape cookies have :attr: `version` 0. :rfc: `2965` and :rfc: `2109` cookies have a ``version`` cookie-attribute of 1. However, note that :mod: `http.cookiejar` may 'downgrade' RFC 2109 cookies to Netscape cookies, in which case :attr: 'version' is 0.

 $System Message: ERROR/3 \ (D:\onboarding-resources\ sample-onboarding-resources\ cpython-main\ Doc\ library\ [cpython-main] \ [Doc] \ [library\] ttp.\ cookiejar.rst, line 635)$

Unknown directive type "attribute".

.. attribute:: Cookie.name
Cookie name (a string).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 640)

Unknown directive type "attribute".

```
.. attribute:: Cookie.value

Cookie value (a string), or :const:`None`.
```

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library] http.cookiejar.rst, line 645)

Unknown directive type "attribute".

```
.. attribute:: Cookie.port

String representing a port or a set of ports (eg. '80', or '80,8080'), or :const:`None`.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 651)

Unknown directive type "attribute".

```
.. attribute:: Cookie.path
Cookie path (a string, eg. ``'/acme/rocket_launchers'``).
```

 $System \, Message: ERROR/3 \, (D: \onboarding-resources \ample-onboarding-resources \c) main\Doc\library\c) [cpython-main] [Doc] [library] http.cookiejar.rst, line 656)$

Unknown directive type "attribute".

```
.. attribute:: Cookie.secure
    ``True`` if cookie should only be returned over a secure connection.
```

 $System Message: ERROR/3 \ (D:\onboarding-resources\ sample-onboarding-resources\ cpython-main\ Doc\ library\ [cpython-main] \ [Doc] \ [library\] ttp.\ cookiejar.rst, line 661)$

Unknown directive type "attribute".

```
.. attribute:: Cookie.expires

Integer expiry date in seconds since epoch, or :const:`None`. See also the :meth:`is_expired` method.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 667)

Unknown directive type "attribute".

```
.. attribute:: Cookie.discard
   ``True`` if this is a session cookie.
```

System Message: ERROR3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[eqthon-main] [Doc] [library]http.cooklejar.rst, [line 672)

Unknown directive type "attribute".

```
String comment from the server explaining the function of this cookie, or :const:`None`.
```

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 678)

Unknown directive type "attribute".

.. attribute:: Cookie.comment_url

URL linking to a comment from the server explaining the function of this cookie, or :const:`None`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]http.cookiejar.rst, line 684)

Unknown directive type "attribute".

.. attribute:: Cookie.rfc2109

``True`` if this cookie was received as an :rfc: 2109` cookie (ie. the cookie arrived in a :mailheader: `Set-Cookie` header, and the value of the Version cookie-attribute in that header was 1). This attribute is provided because :mod: http:/cookiejar' may 'downgrade' RFC 2109 cookies to Netscape cookies, in which case :attr: `version` is 0.

 $System Message: ERROR/3 (p:\onboarding-resources\ample-onboarding-resources\cpython-main\doc\library\cpython-main][Doc][library\http.cookiejar.rst, line 693)$

Unknown directive type "attribute".

.. attribute:: Cookie.port specified

``True`` if a port or set of ports was explicitly specified by the server (in the :mailheader: `Set-Cookie` / :mailheader: `Set-Cookie2` header).

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 699)

Unknown directive type "attribute".

.. attribute:: Cookie.domain_specified

``True`` if a domain was explicitly specified by the server.

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 704)

Unknown directive type "attribute".

.. attribute:: Cookie.domain_initial_dot

''True'' if the domain explicitly specified by the server began with a dot ('''.''').

Cookies may have additional non-standard cookie-attributes. These may be accessed using the following methods:

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 713)

Unknown directive type "method".

.. method:: Cookie.has_nonstandard_attr(name)

Return ``True`` if cookie has the named cookie-attribute.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 718)

Unknown directive type "method".

.. method:: Cookie.get_nonstandard_attr(name, default=None)

If cookie has the named cookie-attribute, return its value. Otherwise, return *default*.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 724)

Unknown directive type "method".

.. method:: Cookie.set_nonstandard_attr(name, value)

Set the value of the named cookie-attribute.

The :class: Cookie' class also defines the following method:

System Message: ERROR/3 (p:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 728); backlink

Unknown interpreted text role "class".

 $System Message: ERROR/3 (p:\onboarding-resources\ample-onboarding-resources\cpython-main\Doc\library\cpython-main] [Doc] [library] http.cookiejar.rst, line 731)$

Unknown directive type "method".

.. method:: Cookie.is_expired(now=None)

``True`` if cookie has passed the time at which the server requested it should expire. If *now* is given (in seconds since the epoch), return whether the cookie has expired at the specified time.

The first example shows the most common usage of :mod: http.cookiejar':

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 741); backlink

Unknown interpreted text role "mod".

```
import http.cookiejar, urllib.request
cj = http.cookiejar.(CookieJar()
opener = urllib.request.build_opener(urllib.request.HTTPCookieProcessor(cj))
r = opener.open("http://example.com/")
```

This example illustrates how to open a URL using your Netscape, Mozilla, or Lynx cookies (assumes Unix/Netscape convention for location of the cookies file):

```
import os, http.cookiejar, urllib.request
cj = http.cookiejar.MozillaCookieJar()
cj.load(os.path.join(os.path.expanduser("~"), ".netscape", "cookies.txt"))
opener = urllib.request.build_opener(urllib.request.HTTPCookieProcessor(cj))
r = opener.open("http://example.com/")
```

The next example illustrates the use of class: DefaultCookiePolicy. Turn on RFC 2965 cookies, be more strict about domains when setting and returning Netscape cookies, and block some domains from setting cookies or having them returned:

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]http.cookiejar.rst, line 757); backlink

Unknown interpreted text role "class".

```
import urllib.request
from http.cookiejar import CookieJar, DefaultCookiePolicy
policy = DefaultCookiePolicy(
    rfc2965=True, strict ns_domain=Policy.DomainStrict,
    blocked_domains=["ads.net", ".ads.net"])
cj = CookieJar(policy)
opener = urllib.request.build_opener(urllib.request.HTTPCookieProcessor(cj))
r = opener.open("http://example.com/")
```