
CFHTTPStream Reference

[Core Foundation](#) > [Networking](#)



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CFHTTPStream Reference

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Framework:	CoreServices
Declared in	CFHTTPStream.h
Companion guides	Getting Started with Networking CFNetwork Programming Guide

Overview

This document describes the CFStream functions for working with HTTP connections.

Functions

CFHTTPReadStreamSetProxy

This function sets the proxy host for a read stream. (**Deprecated.** Use `kCFStreamPropertyHTTPProxy` instead.)

```
void CFHTTPReadStreamSetProxy (
    CFReadStreamRef httpStream,
    CFStringRef proxyHost,
    CFIndex proxyPort
);
```

Parameters

httpStream

The read stream for which a proxy is to be set.

proxyHost

The proxy's fully qualified domain name or IP address in dotted decimal format.

proxyPort

The port number the proxy uses.

Discussion

Call this function if the URL for this read stream can only be reached through a proxy.

Availability

Available in Mac OS X version 10.1 and later.

Deprecated in Mac OS X version 10.3.

Declared In

CFHTTPStream.h

CFHTTPReadStreamSetRedirectsAutomatically

This function enables or disables automatic redirection for a read stream. (**Deprecated.** Use the [kCFStreamPropertyHTTPShouldAutoRedirect](#) (page 10) property instead.)

```
void CFHTTPReadStreamSetRedirectsAutomatically (
    CFReadStreamRef httpStream,
    Boolean shouldAutoRedirect
);
```

Parameters*httpStream*

The read stream for which automatic redirection is to be enabled or disabled.

shouldAutoRedirect

TRUE to enable automatic redirection for the specified stream; FALSE to disable automatic redirection.

Discussion

Call this function before you call `CFReadStreamOpen` to open the read stream. Enabling automatic redirection allows the read stream to be redirected if the URL to which a request is sent is redirected to another URL. If automatic redirection is not enabled, and the URL to which a request is sent redirects the request, the response to this message will contain a response code ranging from 300 to 307.

Availability

Available in Mac OS X version 10.1 and later.

Deprecated in Mac OS X version 10.3.

Declared In

CFHTTPStream.h

CFReadStreamCreateForHTTPRequest

Creates a read stream for a CFHTTP request message.

```
CFReadStreamRef CFReadStreamCreateForHTTPRequest (
    CFAllocatorRef alloc,
    CFHTTPMessageRef request
);
```

Parameters*alloc*

The allocator to use to allocate memory for the new object. Pass NULL or `kCFAllocatorDefault` to use the current default allocator.

request

A CFHTTP request message whose body and headers have been set.

Return Value

A new read stream, or NULL if there was a problem creating the object. Ownership follows the Create Rule.

Discussion

This function creates a read stream and associates it with the specified request. Automatic redirection is disabled by default. After creating the read stream, you can call `CFReadStreamGetError` at any time to check the status of the stream. You may want to call [CFHTTPReadStreamSetRedirectsAutomatically](#) (page 6) to enable automatic redirection, or [CFHTTPReadStreamSetProxy](#) (page 5) to set the name and port number for a proxy. To serialize the request and send it, call `CFReadStreamOpen`.

If the body of the request is too long to keep in memory, call [CFReadStreamCreateForStreamedHTTPRequest](#) (page 7) instead of this function.

Availability

Available in Mac OS X version 10.1 and later.

Declared In

CFHTTPStream.h

CFReadStreamCreateForStreamedHTTPRequest

Creates a read stream for a CFHTTP request message object whose body is too long to keep in memory.

```
CFReadStreamRef CFReadStreamCreateForStreamedHTTPRequest (
    CFAllocatorRef alloc,
    CFHTTPMessageRef requestHeaders,
    CFReadStreamRef requestBody
);
```

Parameters

alloc

The allocator to use to allocate memory for the new object. Pass `NULL` or `kCFAllocatorDefault` to use the current default allocator.

requestHeaders

A CFHTTP request header.

requestBody

Read stream reference for the request body.

Return Value

A new read stream, or `NULL` if there was a problem creating the object. Ownership follows the Create Rule.

Discussion

This function creates a read stream for the response to the *requestHeaders* plus *requestBody*. Call this function instead of [CFReadStreamCreateForHTTPRequest](#) (page 6) when the body of the request is so long that you do not want it to be resident in memory.

Because streams cannot be reset, read streams created this way cannot be enabled for autoredirection.

If the Content-Length header is set in *requestHeaders*, it is assumed that the length is correct and that *requestBody* will report end-of-stream after precisely Content-Length bytes have been read from it. If the Content-Length header is not set, the chunked transfer-encoding will be added to *requestHeaders*, and bytes read from *requestBody* will be transmitted chunked. The body of *requestHeaders* is ignored.

After creating the read stream, you can call `CFReadStreamGetError` at any time to check the status of the stream. You may want to call [CFHTTPReadStreamSetProxy](#) (page 5) to set the name and port number for a proxy. To serialize the request and send it, call `CFReadStreamOpen`.

Availability

Available in Mac OS X version 10.2 and later.

Declared In

CFHTTPStream.h

Constants

CFStream HTTP Error Constants

Error codes that a read stream for an HTTP request may return.

```
typedef enum {
    kCFStreamErrorHTTPParseFailure = -1,
    kCFStreamErrorHTTPRedirectionLoop = -2,
    kCFStreamErrorHTTPBadURL = -3
} CFStreamErrorHTTP;
```

Constants

`kCFStreamErrorHTTPParseFailure`

A parsing error occurred while an incoming message was being deserialized and appended to a message object. The headers of the incoming message may be formatted improperly.

Available in Mac OS X v10.1 and later.

Declared in `CFHTTPStream.h`.

`kCFStreamErrorHTTPRedirectionLoop`

A redirection loop has been detected.

Available in Mac OS X v10.1 and later.

Declared in `CFHTTPStream.h`.

`kCFStreamErrorHTTPBadURL`

The URL is not properly formatted.

Available in Mac OS X v10.1 and later.

Declared in `CFHTTPStream.h`.

Availability

Available in Mac OS X version 10.1 and later.

Declared In

<CFNetwork/CFHTTPStream.h>

CFStream HTTP Property Constants

Constants for setting and copying CFStream HTTP properties.


```

const CFStringRef kCFStreamPropertyHTTPAttemptPersistentConnection;
const CFStringRef kCFStreamPropertyHTTPFinalURL;
extern const CFStringRef kCFStreamPropertyHTTPFinalRequest;
const CFStringRef kCFStreamPropertyHTTPProxy;
const CFStringRef kCFStreamPropertyHTTPRequestBytesWrittenCount;
const CFStringRef kCFStreamPropertyHTTPResponseHeader;
const CFStringRef kCFStreamPropertyHTTPShouldAutoredirect;

```

Constants

`kCFStreamPropertyHTTPAttemptPersistentConnection`

HTTP Attempt Persistent Connection property. The value of this property is a `CFBoolean`. If this property is set to `kCFBooleanTrue`, the HTTP stream looks for an appropriate existing persistent connection to use. If it cannot find one, the HTTP stream will try to create one.

Available in Mac OS X v10.2 and later.

Declared in `CFHTTPStream.h`.

`kCFStreamPropertyHTTPFinalURL`

HTTP Final URL property. A value of type `CFURL` containing the final HTTP URL. This value differs from the URL in the original HTTP request if an autoredirection occurred. This property cannot be set.

Available in Mac OS X v10.2 and later.

Declared in `CFHTTPStream.h`.

`kCFStreamPropertyHTTPFinalRequest`

HTTP Final Request property. A value of type `CFHTTPMessage` containing the final message transmitted by the stream after all modifications (including authentication, connection policy, redirects, and so on) have been made. This property cannot be set.

Available in Mac OS X version 10.5 and later.

Declared in `CFHTTPStream.h`.

`kCFStreamPropertyHTTPProxy`

HTTP Proxy property. To cause an HTTP `CFStream` to use an HTTP proxy, set the value of this property to a `CFDictionary` that includes at least one host/port pair described in “*CFStream SOCKS Proxy Key Constants*” in *CFStream Reference*. `SystemConfiguration` returns a `CFDictionary` that is usable without modification.

Available in Mac OS X v10.2 and later.

Declared in `CFHTTPStream.h`.

`kCFStreamPropertyHTTPProxyHost`

HTTP Proxy Host property. If an HTTP `CFStream` is using an HTTP proxy, the value of this property is a `CFString` containing the host name or IP number of the proxy server.

Declared in `CFHTTPStream.h`.

Available in Mac OS X version 10.2 and later.

`kCFStreamPropertyHTTPProxyPort`

HTTP Proxy Host property. If an HTTP `CFStream` is using an HTTP proxy, the value of this property is a `CFNumber` containing the port number of the proxy server.

Declared in `CFHTTPStream.h`.

Available in Mac OS X version 10.2 and later.

`kCFStreamPropertyHTTPRequestBytesWrittenCount`

HTTP Request Bytes Written property. This property can only be retrieved; it cannot be set. The value of this property is a `CFNumber` containing the number of body bytes that have been written to the server thus far. HTTP header bytes are not included in the count. You can use this property to track the progress of HTTP uploads that take a substantial amount of time to complete.

Available in Mac OS X v10.3 and later.

Declared in `CFHTTPStream.h`.

`kCFStreamPropertyHTTPResponseHeader`

HTTP Response Header property. When copied by `CFReadStreamCopyProperty`, the header of an HTTP response message is returned.

Available in Mac OS X v10.1 and later.

Declared in `CFHTTPStream.h`.

`kCFStreamPropertyHTTPSProxyHost`

HTTPS Proxy Host property. If a `CFStream` is using an HTTPS proxy, the value of this property is a `CFString` containing the host name or IP number of the proxy server.

Declared in `CFHTTPStream.h`.

Available in Mac OS X version 10.2 and later.

`kCFStreamPropertyHTTPSProxyPort`

HTTPS Proxy Host property. If a `CFStream` is using an HTTPS proxy, the value of this property is a `CFNumber` containing the port number of the proxy server.

Declared in `CFHTTPStream.h`.

Available in Mac OS X version 10.2 and later.

`kCFStreamPropertyHTTPShouldAutoredirect`

HTTP Should Auto Redirect property. Set this property to `kCFBooleanTrue` to enable autoredirection; set this property to `kCFBooleanFalse` to disable autoredirection.

Available in Mac OS X v10.2 and later.

Declared in `CFHTTPStream.h`.

Discussion

The `CFStream` HTTP property constants are used to specify the HTTP property to set when calling `CFReadStreamSetProperty` or `CFWriteStreamSetProperty`. They are also used to specify the HTTP property to copy when calling `CFReadStreamCopyProperty` or `CFWriteStreamCopyProperty`.

Availability

Available in Mac OS X version 10.1 and later.

Declared In

`<CFNetwork/CFHTTPStream.h>`

Error Domains

Error domains specific to `CFHTTPStream` calls.

```
extern const SInt32 kCFStreamErrorDomainHTTP;
```

Constants

`kCFStreamErrorDomainHTTP`

Error domain that returns errors associated with the `CFHTTPStream` layer.

Available in Mac OS X v10.1 and later.

Declared in `CFHTTPStream.h`.

Discussion

To determine the source of an error, examine the `userInfo` dictionary included in the `CFError` object returned by a function call or call `CFErrorGetDomain` and pass in the `CFError` object and the domain whose value you want to read.

Document Revision History

This table describes the changes to *CFHTTPStream Reference*.

Date	Notes
2008-07-08	Updated for Mac OS X v10.5.
2007-08-23	Corrected minor typographical error.
2006-08-07	New document that describes the CFStream functions for working with HTTP connections.

REVISION HISTORY

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