
Core Foundation URL Access Utilities Reference

Networking, Internet, & Web: Protocol Streams



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Core Foundation URL Access Utilities Reference

Framework:	CoreFoundation/CoreFoundation.h
Declared in	CFURLAccess.h

Overview

Core Foundation URL Access Utilities give you convenient system-independent methods of creating, reading, updating, or deleting a URL resource.

Given a CFURL object that holds either a file or http URL, you can read the resource's data with the [CFURLCreateDataAndPropertiesFromResource](#) (page 5) function. You can write data to the URL resource, possibly creating a new file, with the [CFURLWriteDataAndPropertiesToResource](#) (page 8) function. Finally, you can destroy, or delete, the resource pointed to by the URL with the [CFURLDestroyResource](#) (page 7) function.

Functions

CFURLCreateDataAndPropertiesFromResource

Loads the data and properties referred to by a given URL.

```
Boolean CFURLCreateDataAndPropertiesFromResource (
    CFAllocatorRef alloc,
    CFURLRef url,
    CFDataRef *resourceData,
    CFDictionaryRef *properties,
    CFArrayRef desiredProperties,
    SInt32 *errorCode
);
```

Parameters

allocator

The allocator to use to allocate memory for the new CFData and CFDictionary objects returned in *resourceData* and *properties*. Pass NULL or kCFAllocatorDefault to use the current default allocator.

url

The URL referring to the data and/or properties you wish to load.

resourceData

On return, contains a CFData object containing the data referred to by *url*. Ownership follows the Create Rule.

properties

On return, a pointer to a `CFDictionary` object containing the resource properties referred to by *url*. Ownership follows the Create Rule.

desiredProperties

A list of the properties you wish to obtain and return in *properties*. See “[File URL Properties](#)” (page 10) and “[HTTP URL Properties](#)” (page 11) for the list of available properties.

errorCode

0 if successful, otherwise an error code indicating the nature of the problem. See “[Error Codes](#)” (page 9) for a list of possible error codes.

Return Value

true if successful, false otherwise.

Discussion

If you are interested in loading only the resource data or the resource's properties, pass `NULL` for the one you don't want. If *properties* is non-`NULL` and *desiredProperties* is `NULL` then all properties are fetched. Note that as much work as possible is done even if `false` is returned. For instance, if one property is not available, the others are fetched anyway. This function is intended for convenience, not performance.

Availability

Available in Mac OS X v10.0 and later.

Related Sample Code

AuthForAll

GLUT

HID Config Save

HID Utilities Source

MoreSCF

Declared In

`CFURLAccess.h`

CFURLCreatePropertyFromResource

Returns a given property specified by a given URL and property string.

```
CTypeRef CFURLCreatePropertyFromResource (
    CFAllocatorRef alloc,
    CFURLRef url,
    CFStringRef property,
    SInt32 *errorCode
);
```

Parameters

allocator

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

url

The `CFURL` object referring to the resource whose properties are loaded.

property

The name of the property you wish to load. Pass one of the provided string constants indicating the property. See [“File URL Properties”](#) (page 10) and [“HTTP URL Properties”](#) (page 11) for the list of available properties.

errorCode

On return, 0 if successful, otherwise an error code indicating the nature of the problem. See [“Error Codes”](#) (page 9) for a list of possible error codes.

Return Value

If successful, the requested property as a `CFTYPE` object, `NULL` otherwise. Ownership follows the Create Rule.

Discussion

This is a convenience function for retrieving individual property values which calls through to [`CFURLCreateDataAndPropertiesFromResource`](#) (page 5).

Availability

Available in Mac OS X v10.0 and later.

Declared In

`CFURLAccess.h`

CFURLDestroyResource

Destroys a resource indicated by a given URL.

```
Boolean CFURLDestroyResource (
    CFURLRef url,
    SInt32 *errorCode
);
```

Parameters*url*

The `CFURL` object of the resource to destroy.

errorCode

On return, 0 if successful, otherwise an error code indicating the nature of the problem. See [“Error Codes”](#) (page 9) for a list of possible error codes.

Return Value

`true` if successful, `false` otherwise.

Discussion

If *url* uses an `http` scheme, an `http DELETE` request is sent to the resource. If *url* uses a file scheme, then:

- if the reference is a file, the file is deleted;
- if the reference is a directory and the directory is empty, the directory is deleted;
- if the reference is a directory and the directory is not empty, the function returns `false` and *errorCode* contains `kCFURLUnknownError`.

Availability

Available in Mac OS X v10.0 and later.

Declared In

`CFURLAccess.h`

CFURLWriteDataAndPropertiesToResource

Writes the given data and properties to a given URL.

```

Boolean CFURLWriteDataAndPropertiesToResource (
    CFURLRef url,
    CFDataRef dataToWrite,
    CFDictionaryRef propertiesToWrite,
    SInt32 *errorCode
);

```

Parameters

url

The resource to write.

dataToWrite

The data to write. Pass NULL to write only properties.

propertiesToWrite

The properties to write. Pass NULL to write only data. See “[File URL Properties](#)” (page 10) and “[HTTP URL Properties](#)” (page 11) for the list of available properties.

errorCode

Upon return, 0 if successful, otherwise contains an error code indicating the nature of the problem. See “[Error Codes](#)” (page 9) for a list of possible error codes.

Return Value

true if successful, false otherwise.

Discussion

Properties not present in *propertiesToWrite* are left unchanged, hence if *propertiesToWrite* is NULL or empty, the URL's properties are not changed at all.

If *url* uses a file scheme and it references a file, the contents of *dataToWrite* are written to the referenced file, overwriting any preexisting data, and the file's properties are modified according to *propertiesToWrite*. If the file does not exist, but all intermediate directories along the path do already exist, the file is created (otherwise it is not).

If *url* uses a file scheme and it references a directory (the last path character is "/"), the contents of *dataToWrite* are ignored, but if the parameter value is not NULL—and all intermediate directories along the path do already exist—a new directory is created (otherwise it is not).

If *url* uses an http scheme, an http PUT request is sent to the resource with *propertiesToWrite* as the header fields and *dataToWrite* as the data.

Availability

Available in Mac OS X v10.0 and later.

Related Sample Code

CFPrefTopScores

HID Calibrator

HID Config Save

HID Dumper

SeeMyFriends

Declared In

CFURLAccess.h

Constants

Error Codes

CFURL error codes.

```
enum CFURLError {
    kCFURLUnknownError = -10,
    kCFURLUnknownSchemeError = -11,
    kCFURLResourceNotFoundError = -12,
    kCFURLResourceAccessViolationError = -13,
    kCFURLRemoteHostUnavailableError = -14,
    kCFURLImproperArgumentsError = -15,
    kCFURLUnknownPropertyKeyError = -16,
    kCFURLPropertyKeyUnavailableError = -17,
    kCFURLTimeoutError = -18
};
typedef enum CFURLError CFURLError;
```

Constants

`kCFURLUnknownError`

Indicates an unknown error.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLUnknownSchemeError`

Indicates that the scheme is not recognized.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLResourceNotFoundError`

Indicates a resource was not found.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLResourceAccessViolationError`

Indicates an error in accessing a resource.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLRemoteHostUnavailableError`

Indicates a remote host is unavailable.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLImproperArgumentsError`

Indicates one or more arguments are improper.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLUnknownPropertyKeyError`

Indicates a property key is unknown.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLPropertyKeyUnavailableError`

Indicates a property key was unavailable.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLTimeoutError`

Indicates a timeout.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

Availability

Available in Mac OS X version 10.0 and later.

Declared In

`CFURLAccess.h`

File URL Properties

Properties for file URL resources.

```
const CFStringRef kCFURLFileExists;  
const CFStringRef kCFURLFileDirectoryContents;  
const CFStringRef kCFURLFileLength;  
const CFStringRef kCFURLFileLastModificationTime;  
const CFStringRef kCFURLFilePOSIXMode;  
const CFStringRef kCFURLFileOwnerID;
```

Constants

`kCFURLFileExists`

A `CFBoolean` object indicating whether the file referred to by a URL exists.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLFileDirectoryContents`

A `CFArray` object holding `CFURL` objects for the contents of a directory referred to by a URL.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLFileLength`

A `CFNumber` object holding the file's length in bytes.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLFileLastModificationTime`

A `CFDate` object holding the file's modification time.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLFilePOSIXMode`

A `CFNumber` holding the file's POSIX mode as given in `/usr/include/sys/stat.h`.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLFileOwnerID`

A `CFNumber` holding the file owner's UID.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

Availability

Available in Mac OS X version 10.0 and later.

Declared In

`CFURLAccess.h`

HTTP URL Properties

Properties for HTTP URL resources.

```
const CFStringRef kCFURLHTTPStatusCode;  
const CFStringRef kCFURLHTTPStatusLine;
```

Constants

`kCFURLHTTPStatusCode`

A `CFNumber` object holding the status code of an HTTP request.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

`kCFURLHTTPStatusLine`

A `CFString` object holding the status line of an HTTP request.

Available in Mac OS X v10.0 and later.

Declared in `CFURLAccess.h`.

Discussion

In addition to the above properties, each field within an HTTP request or response header is itself a property. You can specify a header field by using the field name as the property name.

Availability

Available in Mac OS X version 10.0 and later.

Declared In

`CFURLAccess.h`

Document Revision History

This table describes the changes to *Core Foundation URL Access Utilities Reference*.

Date	Notes
2007-01-19	Clarified behavior of CFURLDestroyResource.
	If any additional changes are made for Leopard, add revision history item for 2.4.
2006-01-10	Clarified the description of the CFURLWriteDataAndPropertiesToResource function.
2005-11-09	Removed reference to retired document.
2005-08-11	Cosmetic changes to conform to documentation guidelines.
2003-01-01	First version of this document.

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