
NSData Class Reference

[Cocoa > Data Management](#)



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NSData Class Reference

Inherits from	NSObject
Conforms to	NSCoding NSCopying NSMutableCopying NSObject (NSObject)
Framework	/System/Library/Frameworks/Foundation.framework
Availability	Available in Mac OS X v10.0 and later.
Declared in	NSData.h
Companion guides	Binary Data Programming Guide for Cocoa Property List Programming Guide
Related sample code	CocoaHTTPServer CocoaSOAP iSpend Sketch-112 StickiesExample

Overview

`NSData` and its mutable subclass `NSMutableData` provide data objects, object-oriented wrappers for byte buffers. Data objects let simple allocated buffers (that is, data with no embedded pointers) take on the behavior of Foundation objects.

`NSData` creates static data objects, and `NSMutableData` creates dynamic data objects. `NSData` and `NSMutableData` are typically used for data storage and are also useful in Distributed Objects applications, where data contained in data objects can be copied or moved between applications.

Using 32-bit Cocoa, the size of the data is subject to a theoretical 2GB limit (in practice, because memory will be used by other objects this limit will be smaller); using 64-bit Cocoa, the size of the data is subject to a theoretical limit of about 8EB (in practice, the limit should not be a factor).

`NSData` is “toll-free bridged” with its Core Foundation counterpart, `CFData`. This means that the Core Foundation type is interchangeable in function or method calls with the bridged Foundation object. Therefore, in a method where you see an `NSData *` parameter, you can pass a `CFDataRef`, and in a function where you see a `CFDataRef` parameter, you can pass an `NSData` instance (you cast one type to the other to suppress compiler warnings). This also applies to your concrete subclasses of `NSData`. See [Interchangeable Data Types](#) for more information on toll-free bridging.

Adopted Protocols

NSCoding

- encodeWithCoder:
- initWithCoder:

NSCopying

- copyWithZone:

NSMutableCopying

- mutableCopyWithZone:

Tasks

Creating Data Objects

- + [data](#) (page 8)
Creates and returns an empty data object.
- + [dataWithBytes:length:](#) (page 8)
Creates and returns a data object containing a given number of bytes copied from a given buffer.
- + [dataWithBytesNoCopy:length:](#) (page 9)
Creates and returns a data object that holds *length* bytes from the buffer *bytes*.
- + [dataWithBytesNoCopy:length:freeWhenDone:](#) (page 9)
Creates and returns a data object that holds a given number of bytes from a given buffer.
- + [dataWithContentsOfFile:](#) (page 10)
Creates and returns a data object by reading every byte from the file specified by a given path.
- + [dataWithContentsOfFile:options:error:](#) (page 11)
Creates and returns a data object by reading every byte from the file specified by a given path.
- + [dataWithContentsOfMappedFile:](#) (page 11)
Creates and returns a data object from the mapped file specified by *path*.
- + [dataWithContentsOfURL:](#) (page 12)
Returns a data object containing the data from the location specified by a given URL.
- + [dataWithContentsOfURL:options:error:](#) (page 13)
Creates and returns a data object containing the data from the location specified by *aURL*.
- + [dataWithData:](#) (page 13)
Creates and returns a data object containing the contents of another data object.
- [initWithBytes:length:](#) (page 16)
Returns a data object initialized by adding to it a given number of bytes of data copied from a given buffer.
- [initWithBytesNoCopy:length:](#) (page 17)
Returns a data object initialized by adding to it a given number of bytes of data from a given buffer.
- [initWithBytesNoCopy:length:freeWhenDone:](#) (page 17)
Initializes a newly allocated data object by adding to it *length* bytes of data from the buffer *bytes*.

- [initWithContentsOfFile:](#) (page 18)
Returns a data object initialized by reading into it the data from the file specified by a given path.
- [initWithContentsOfFile:options:error:](#) (page 19)
Returns a data object initialized by reading into it the data from the file specified by a given path.
- [initWithContentsOfMappedFile:](#) (page 19)
Returns a data object initialized by reading into it the mapped file specified by a given path.
- [initWithContentsOfURL:](#) (page 20)
Initializes a newly allocated data object initialized with the data from the location specified by *aURL*.
- [initWithContentsOfURL:options:error:](#) (page 20)
Returns a data object initialized with the data from the location specified by a given URL.
- [initWithData:](#) (page 21)
Returns a data object initialized with the contents of another data object.

Accessing Data

- [bytes](#) (page 14)
Returns a pointer to the receiver's contents.
- [description](#) (page 14)
Returns an `NSString` object that contains a hexadecimal representation of the receiver's contents.
- [getBytes:](#) (page 15)
Copies a data object's contents into a given buffer.
- [getBytes:length:](#) (page 15)
Copies a number of bytes from the start of the receiver's data into a given buffer.
- [getBytes:range:](#) (page 16)
Copies a range of bytes from the receiver's data into a given buffer.
- [subdataWithRange:](#) (page 22)
Returns a data object containing a copy of the receiver's bytes that fall within the limits specified by a given range.

Testing Data

- [isEqualToData:](#) (page 21)
Compares the receiving data object to *otherData*.
- [length](#) (page 21)
Returns the number of bytes contained in the receiver.

Storing Data

- [writeToFile:atomically:](#) (page 22)
Writes the bytes in the receiver to the file specified by a given path.
- [writeToFile:options:error:](#) (page 23)
Writes the bytes in the receiver to the file specified by a given path.

- [writeToURL:atomically:](#) (page 23)
Writes the bytes in the receiver to the location specified by *aURL*.
- [writeToURL:options:error:](#) (page 24)
Writes the bytes in the receiver to the location specified by a given URL.

Class Methods

data

Creates and returns an empty data object.

```
+ (id)data
```

Return Value

An empty data object.

Discussion

This method is declared primarily for the use of mutable subclasses of `NSData`.

Availability

Available in Mac OS X v10.0 and later.

Related Sample Code

EnhancedDataBurn

UIKitMovieShuffler

Declared In

`NSData.h`

dataWithBytes:length:

Creates and returns a data object containing a given number of bytes copied from a given buffer.

```
+ (id)dataWithBytes:(const void *)bytes length:(NSUInteger)length
```

Parameters

bytes

A buffer containing data for the new object.

length

The number of bytes to copy from *bytes*. This value must not exceed the length of *bytes*.

Return Value

A data object containing *length* bytes copied from the buffer *bytes*. Returns `nil` if the data object could not be created.

Availability

Available in Mac OS X v10.0 and later.

See Also

+ [dataWithBytesNoCopy:length:](#) (page 9)

+ [dataWithBytesNoCopy:length:freeWhenDone:](#) (page 9)

Related Sample Code

CocoaHTTPServer

CocoaSOAP

EnhancedDataBurn

QTCoreVideo301

QTMetadataEditor

Declared In

NSData.h

dataWithBytesNoCopy:length:

Creates and returns a data object that holds *length* bytes from the buffer *bytes*.

```
+ (id)dataWithBytesNoCopy:(void *)bytes length:(NSUInteger)length
```

Parameters

bytes

A buffer containing data for the new object. *bytes* must point to a memory block allocated with `malloc`.

length

The number of bytes to hold from *bytes*. This value must not exceed the length of *bytes*.

Return Value

A data object that holds *length* bytes from the buffer *bytes*. Returns `nil` if the data object could not be created.

Discussion

The returned object takes ownership of the *bytes* pointer and frees it on deallocation. Therefore, *bytes* must point to a memory block allocated with `malloc`.

Availability

Available in Mac OS X v10.0 and later.

See Also

+ [dataWithBytes:length:](#) (page 8)

+ [dataWithBytesNoCopy:length:freeWhenDone:](#) (page 9)

Declared In

NSData.h

dataWithBytesNoCopy:length:freeWhenDone:

Creates and returns a data object that holds a given number of bytes from a given buffer.

```
+ (id)dataWithBytesNoCopy:(void *)bytes length:(NSUInteger)length
    freeWhenDone:(BOOL)freeWhenDone
```

Parameters*bytes*

A buffer containing data for the new object. If *freeWhenDone* is YES, *bytes* must point to a memory block allocated with `malloc`.

length

The number of bytes to hold from *bytes*. This value must not exceed the length of *bytes*.

freeWhenDone

If YES, the returned object takes ownership of the *bytes* pointer and frees it on deallocation.

Return Value

A data object that holds *length* bytes from the buffer *bytes*. Returns `nil` if the data object could not be created.

Availability

Available in Mac OS X v10.2 and later.

See Also

+ [dataWithBytes:length:](#) (page 8)

+ [dataWithBytesNoCopy:length:](#) (page 9)

Related Sample Code

CocoaSpeechSynthesisExample

Declared In

NSData.h

dataWithContentsOfFile:

Creates and returns a data object by reading every byte from the file specified by a given path.

```
+ (id)dataWithContentsOfFile:(NSString *)path
```

Parameters*path*

The absolute path of the file from which to read data.

Return Value

A data object by reading every byte from the file specified by *path*. Returns `nil` if the data object could not be created.

Discussion

This method is equivalent to [dataWithContentsOfFile:options:error:](#) (page 11) with no options. If you need to know what was the reason for failure, use [dataWithContentsOfFile:options:error:](#) (page 11).

A sample using this method can be found in Working With Binary Data.

Availability

Available in Mac OS X v10.0 and later.

See Also

+ [dataWithContentsOfFile:options:error:](#) (page 11)

+ [dataWithContentsOfMappedFile:](#) (page 11)

Related Sample Code

CarbonCocoaCoreImageTab

iSpend

LiveVideoMixer3

OpenGLCompositorLab

Reducer

Declared In

NSData.h

dataWithContentsOfFile:options:error:

Creates and returns a data object by reading every byte from the file specified by a given path.

```
+ (id)dataWithContentsOfFile:(NSString *)path options:(NSUInteger)mask error:(NSError
**)errorPtr
```

Parameters*path*

The absolute path of the file from which to read data.

*mask*A mask that specifies options for reading the data. Constant components are described in [“Options for NSData Reading Methods”](#) (page 25).*errorPtr*If an error occurs, upon return contains an `NSError` object that describes the problem.**Return Value**A data object by reading every byte from the file specified by *path*. Returns `nil` if the data object could not be created.**Availability**

Available in Mac OS X v10.4 and later.

Declared In

NSData.h

dataWithContentsOfMappedFile:Creates and returns a data object from the mapped file specified by *path*.

```
+ (id)dataWithContentsOfMappedFile:(NSString *)path
```

Parameters*path*

The absolute path of the file from which to read data.

Return ValueA data object from the mapped file specified by *path*. Returns `nil` if the data object could not be created.

Discussion

Because of file mapping restrictions, this method should only be used if the file is guaranteed to exist for the duration of the data object's existence. It is generally safer to use the [dataWithContentsOfFile:](#) (page 10) method.

This methods assumes mapped files are available from the underlying operating system. A mapped file uses virtual memory techniques to avoid copying pages of the file into memory until they are actually needed.

Availability

Available in Mac OS X v10.0 and later.

See Also

+ [dataWithContentsOfFile:](#) (page 10)

Related Sample Code

Quartz EB

Declared In

NSData.h

dataWithContentsOfURL:

Returns a data object containing the data from the location specified by a given URL.

```
+ (id)dataWithContentsOfURL:(NSURL *)aURL
```

Parameters

aURL

The URL from which to read data.

Return Value

A data object containing the data from the location specified by *aURL*. Returns *nil* if the data object could not be created.

Discussion

If you need to know what was the reason for failure, use [dataWithContentsOfURL:options:error:](#) (page 13).

Availability

Available in Mac OS X v10.0 and later.

See Also

+ [dataWithContentsOfURL:options:error:](#) (page 13)

- [initWithContentsOfURL:](#) (page 20)

Related Sample Code

CocoaSpeechSynthesisExample

Core Data HTML Store

CustomAtomicStoreSubclass

QTKitCreateMovie

WebKitCIPlugin

Declared In

NSData.h

dataWithContentsOfURL:options:error:

Creates and returns a data object containing the data from the location specified by *aURL*.

```
+ (id)dataWithContentsOfURL:(NSURL *)aURL options:(NSUInteger)mask error:(NSError **)errorPtr
```

Parameters

aURL

The URL from which to read data.

mask

A mask that specifies options for reading the data. Constant components are described in “[Options for NSData Reading Methods](#)” (page 25).

errorPtr

If there is an error reading in the data, upon return contains an `NSError` object that describes the problem.

Availability

Available in Mac OS X v10.4 and later.

See Also

- [initWithContentsOfURL:](#) (page 20)

Declared In

`NSData.h`

dataWithData:

Creates and returns a data object containing the contents of another data object.

```
+ (id)dataWithData:(NSData *)aData
```

Parameters

aData

A data object.

Return Value

A data object containing the contents of *aData*. Returns `nil` if the data object could not be created.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [initWithData:](#) (page 21)

Related Sample Code

Core Data HTML Store

Declared In

`NSData.h`

Instance Methods

bytes

Returns a pointer to the receiver's contents.

- (const void *)bytes

Return Value

A read-only pointer to the receiver's contents.

Discussion

If the [length](#) (page 21) of the receiver is 0, this method returns `nil`.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [description](#) (page 14)
- [getBytes:](#) (page 15)
- [getBytes:length:](#) (page 15)
- [getBytes:range:](#) (page 16)

Related Sample Code

AudioBurn
CocoaHTTPServer
CocoaSOAP
EnhancedDataBurn
QTSSConnectionMonitor

Declared In

NSData.h

description

Returns an `NSString` object that contains a hexadecimal representation of the receiver's contents.

- (NSString *)description

Return Value

An `NSString` object that contains a hexadecimal representation of the receiver's contents in `NSData` property list format.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [bytes](#) (page 14)
- [getBytes:](#) (page 15)
- [getBytes:length:](#) (page 15)

- [getBytes:range:](#) (page 16)

Related Sample Code

Fiendishthngs

Declared In

NSData.h

getBytes:

Copies a data object's contents into a given buffer.

```
- (void)getBytes:(void *)buffer
```

Parameters

buffer

A buffer into which to copy the receiver's data. The buffer must be at least [length](#) (page 21) bytes.

Discussion

You can see a sample using this method in Working With Binary Data.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [bytes](#) (page 14)
- [description](#) (page 14)
- [getBytes:length:](#) (page 15)
- [getBytes:range:](#) (page 16)

Related Sample Code

JavaSplashScreen

OpenGLCaptureToMovie

QTCoreVideo301

QTMetadataEditor

Quartz Composer QCTV

Declared In

NSData.h

getBytes:length:

Copies a number of bytes from the start of the receiver's data into a given buffer.

```
- (void)getBytes:(void *)buffer length:(NSUInteger)length
```

Parameters

buffer

A buffer into which to copy data.

length

The number of bytes from the start of the receiver's data to copy to *buffer*.

Discussion

The number of bytes copied is the smaller of the *length* parameter and the `length` of the data encapsulated in the object.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [bytes](#) (page 14)
- [description](#) (page 14)
- [getBytes:](#) (page 15)
- [getBytes:range:](#) (page 16)

Declared In

NSData.h

getBytes:range:

Copies a range of bytes from the receiver's data into a given buffer.

```
- (void)getBytes:(void *)buffer range:(NSRange)range
```

Parameters

buffer

A buffer into which to copy data.

range

The range of bytes in the receiver's data to copy to *buffer*. The range must lie within the range of bytes of the receiver's data.

Discussion

If *range* isn't within the receiver's range of bytes, an `NSRangeException` is raised.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [bytes](#) (page 14)
- [description](#) (page 14)
- [getBytes:](#) (page 15)
- [getBytes:length:](#) (page 15)

Declared In

NSData.h

initWithBytes:length:

Returns a data object initialized by adding to it a given number of bytes of data copied from a given buffer.

```
- (id)initWithBytes:(const void *)bytes length:(NSUInteger)length
```


Discussion

A data object initialized by adding to it *length* bytes of data copied from the buffer *bytes*. The returned object might be different than the original receiver.

Availability

Available in Mac OS X v10.0 and later.

See Also

- + [initWithBytes:length:](#) (page 8)
- [initWithBytesNoCopy:length:](#) (page 17)
- [initWithBytesNoCopy:length:freeWhenDone:](#) (page 17)

Declared In

NSData.h

initWithBytesNoCopy:length:

Returns a data object initialized by adding to it a given number of bytes of data from a given buffer.

```
- (id)initWithBytesNoCopy:(void *)bytes length:(NSUInteger)length
```

Parameters

bytes

A buffer containing data for the new object. *bytes* must point to a memory block allocated with `malloc`.

length

The number of bytes to hold from *bytes*. This value must not exceed the length of *bytes*.

Return Value

A data object initialized by adding to it *length* bytes of data from the buffer *bytes*. The returned object might be different than the original receiver.

Discussion

The returned object takes ownership of the *bytes* pointer and frees it on deallocation. Therefore, *bytes* must point to a memory block allocated with `malloc`.

Availability

Available in Mac OS X v10.0 and later.

See Also

- + [initWithBytes:length:](#) (page 8)
- [initWithBytes:length:](#) (page 16)
- [initWithBytesNoCopy:length:freeWhenDone:](#) (page 17)

Declared In

NSData.h

initWithBytesNoCopy:length:freeWhenDone:

Initializes a newly allocated data object by adding to it *length* bytes of data from the buffer *bytes*.

```
- (id)initWithBytesNoCopy:(void *)bytes length:(NSUInteger)length
    freeWhenDone:(BOOL)flag
```

Parameters*bytes*

A buffer containing data for the new object. If *flag* is YES, *bytes* must point to a memory block allocated with `malloc`.

length

The number of bytes to hold from *bytes*. This value must not exceed the length of *bytes*.

flag

If YES, the returned object takes ownership of the *bytes* pointer and frees it on deallocation.

Availability

Available in Mac OS X v10.2 and later.

See Also

+ [initWithBytesNoCopy:length:freeWhenDone:](#) (page 9)

- [initWithBytes:length:](#) (page 16)

- [initWithBytesNoCopy:length:](#) (page 17)

Declared In

NSData.h

initWithContentsOfFile:

Returns a data object initialized by reading into it the data from the file specified by a given path.

```
- (id)initWithContentsOfFile:(NSString *)path
```

Parameters*path*

The absolute path of the file from which to read data.

Return Value

A data object initialized by reading into it the data from the file specified by *path*. The returned object might be different than the original receiver.

Discussion

This method is equivalent to [initWithContentsOfFile:options:error:](#) (page 19) with no options.

Availability

Available in Mac OS X v10.0 and later.

See Also

+ [initWithContentsOfFile:](#) (page 10)

- [initWithContentsOfMappedFile:](#) (page 19)

Declared In

NSData.h

initWithContentsOfFile:options:error:

Returns a data object initialized by reading into it the data from the file specified by a given path.

```
- (id)initWithContentsOfFile:(NSString *)path options:(NSUInteger)mask error:(NSError **)errorPtr
```

Parameters

path

The absolute path of the file from which to read data.

mask

A mask that specifies options for reading the data. Constant components are described in [“Options for NSData Reading Methods”](#) (page 25).

errorPtr

If an error occurs, upon return contains an `NSError` object that describes the problem.

Return Value

A data object initialized by reading into it the data from the file specified by *path*. The returned object might be different than the original receiver.

Availability

Available in Mac OS X v10.4 and later.

See Also

+ [dataWithContentsOfFile:options:error:](#) (page 11)

Declared In

`NSData.h`

initWithContentsOfMappedFile:

Returns a data object initialized by reading into it the mapped file specified by a given path.

```
- (id)initWithContentsOfMappedFile:(NSString *)path
```

Parameters

path

The absolute path of the file from which to read data.

Return Value

A data object initialized by reading into it the mapped file specified by *path*. The returned object might be different than the original receiver.

Availability

Available in Mac OS X v10.0 and later.

See Also

+ [dataWithContentsOfMappedFile:](#) (page 11)

- [initWithContentsOfFile:](#) (page 18)

Declared In

`NSData.h`

initWithContentsOfURL:

Initializes a newly allocated data object initialized with the data from the location specified by *aURL*.

```
- (id)initWithContentsOfURL:(NSURL *)aURL
```

Parameters

aURL

The URL from which to read data

Return Value

An `NSData` object initialized with the data from the location specified by *aURL*. The returned object might be different than the original receiver.

Availability

Available in Mac OS X v10.0 and later.

See Also

+ [dataWithContentsOfURL:](#) (page 12)

Declared In

`NSData.h`

initWithContentsOfURL:options:error:

Returns a data object initialized with the data from the location specified by a given URL.

```
- (id)initWithContentsOfURL:(NSURL *)aURL options:(NSUInteger)mask error:(NSError **)errorPtr
```

Parameters

aURL

The URL from which to read data.

mask

A mask that specifies options for reading the data. Constant components are described in “[Options for NSData Reading Methods](#)” (page 25).

errorPtr

If there is an error reading in the data, upon return contains an `NSError` object that describes the problem.

Return Value

A data object initialized with the data from the location specified by *aURL*. The returned object might be different than the original receiver.

Availability

Available in Mac OS X v10.4 and later.

See Also

+ [dataWithContentsOfURL:options:error:](#) (page 13)

Declared In

`NSData.h`

initWithData:

Returns a data object initialized with the contents of another data object.

```
- (id)initWithData:(NSData *)data
```

Parameters

data

A data object.

Return Value

A data object initialized with the contents *data*. The returned object might be different than the original receiver.

Availability

Available in Mac OS X v10.0 and later.

See Also

+ [dataWithData:](#) (page 13)

Declared In

NSData.h

isEqualToData:

Compares the receiving data object to *otherData*.

```
- (BOOL)isEqualToData:(NSData *)otherData
```

Parameters

otherData

The data object with which to compare the receiver.

Return Value

YES if the contents of *otherData* are equal to the contents of the receiver, otherwise NO.

Discussion

Two data objects are equal if they hold the same number of bytes, and if the bytes at the same position in the objects are the same.

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSData.h

length

Returns the number of bytes contained in the receiver.

```
- (NSUInteger)length
```

Return Value

The number of bytes contained in the receiver.

Availability

Available in Mac OS X v10.0 and later.

Related Sample Code

AudioBurn

CocoaHTTPServer

CocoaSOAP

QTMetadataEditor

Spotlight

Declared In

NSData.h

subdataWithRange:

Returns a data object containing a copy of the receiver's bytes that fall within the limits specified by a given range.

```
- (NSData *)subdataWithRange:(NSRange)range
```

Parameters

range

The range in the receiver from which to copy bytes. The range must not exceed the bounds of the receiver.

Return Value

A data object containing a copy of the receiver's bytes that fall within the limits specified by *range*.

Discussion

If *range* isn't within the receiver's range of bytes, an `NSRangeException` is raised.

A sample using this method can be found in [Working With Binary Data](#).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSData.h

writeToFile:atomically:

Writes the bytes in the receiver to the file specified by a given path.

```
- (BOOL)writeToFile:(NSString *)path atomically:(BOOL)flag
```

Parameters

path

The location to which to write the receiver's bytes. If *path* contains a tilde (~) character, you must expand it with `stringByExpandingTildeInPath` before invoking this method.

atomically

If YES, the data is written to a backup file, and then—assuming no errors occur—the backup file is renamed to the name specified by *path*; otherwise, the data is written directly to *path*.

Return Value

YES if the operation succeeds, otherwise NO.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [writeToURL:atomically:](#) (page 23)

Related Sample Code

Aperture Edit Plugin - Borders & Titles

People

Quartz Composer WWDC 2005 TextEdit

TextEditPlus

WhackedTV

Declared In

NSData.h

writeToFile:options:error:

Writes the bytes in the receiver to the file specified by a given path.

```
- (BOOL)writeToFile:(NSString *)path options:(NSUInteger)mask error:(NSError
    **)errorPtr
```

Parameters

path

The location to which to write the receiver's bytes.

mask

A mask that specifies options for writing the data. Constant components are described in [“Options for NSData Writing Methods”](#) (page 25).

errorPtr

If there is an error writing out the data, upon return contains an NSError object that describes the problem.

Return Value

YES if the operation succeeds, otherwise NO.

Availability

Available in Mac OS X v10.4 and later.

See Also

- [writeToURL:options:error:](#) (page 24)

Declared In

NSData.h

writeToURL:atomically:

Writes the bytes in the receiver to the location specified by *aURL*.

```
- (BOOL)writeToURL:(NSURL *)aURL atomically:(BOOL)atomically
```

Parameters

aURL

The location to which to write the receiver's bytes. Only `file://` URLs are supported.

atomically

If YES, the data is written to a backup location, and then—assuming no errors occur—the backup location is renamed to the name specified by *aURL*; otherwise, the data is written directly to *aURL*. *atomically* is ignored if *aURL* is not of a type that supports atomic writes.

Return Value

YES if the operation succeeds, otherwise NO.

Discussion

Since at present only `file://` URLs are supported, there is no difference between this method and [writeToFile:atomically:](#) (page 22), except for the type of the first argument.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [writeToFile:atomically:](#) (page 22)

Related Sample Code

Core Data HTML Store

CoreRecipes

CustomAtomicStoreSubclass

Declared In

NSData.h

writeToURL:options:error:

Writes the bytes in the receiver to the location specified by a given URL.

```
- (BOOL)writeToURL:(NSURL *)aURL options:(NSUInteger)mask error:(NSError **)errorPtr
```

Parameters

aURL

The location to which to write the receiver's bytes.

mask

A mask that specifies options for writing the data. Constant components are described in “[Options for NSData Writing Methods](#)” (page 25).

errorPtr

If there is an error writing out the data, upon return contains an `NSError` object that describes the problem.

Return Value

YES if the operation succeeds, otherwise NO.

Discussion

Since at present only `file://` URLs are supported, there is no difference between this method and [writeToFile:options:error:](#) (page 23), except for the type of the first argument.

Availability

Available in Mac OS X v10.4 and later.

See Also

- [writeToFile:options:error:](#) (page 23)

Declared In

NSData.h

Constants

Options for NSData Reading Methods

Options for methods used to read NSData objects.

```
enum {
    NSMappedRead = 1,
    NSUncachedRead = 2
};
```

Constants

NSMappedRead

A hint indicating the file should be mapped into virtual memory, if possible.

Available in Mac OS X v10.4 and later.

Declared in NSData.h.

NSUncachedRead

A hint indicating the file should not be stored in the file-system caches.

For data being read once and discarded, this option can improve performance.

Available in Mac OS X v10.4 and later.

Declared in NSData.h.

Declared In

NSData.h

Options for NSData Writing Methods

Options for methods used to write NSData objects.

```
enum {
    NSAtomicWrite = 1
};
```

Constants

NSAtomicWrite

A hint to use an auxiliary file when saving data and then exchange the files.

Available in Mac OS X v10.4 and later.

Declared in NSData.h.

Declared In
NSData.h

Document Revision History

This table describes the changes to *NSData Class Reference*.

Date	Notes
2009-05-06	Added subclassing notes. Clarified behavior of bytes and getData:length: methods.
2008-02-08	Corrected typographical errors.
2007-02-27	Updated for Mac OS X v10.5 API.
2006-05-23	First publication of this content as a separate document.

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