CFDate Reference

Core Foundation

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CFDate Reference

Derived From:	CFPropertyList : CFType
Framework:	CoreFoundation/CoreFoundation.h
Declared in	CFDate.h
Companion guides	Dates and Times Programming Guide for Core Foundation Property List Programming Topics for Core Foundation

Overview

CFDate objects store dates and times that can be compared to other dates and times. CFDate objects are immutable—there is no mutable counterpart for this opaque type.

CFDate provides functions for creating dates, comparing dates, and computing intervals. You use the `CFDateCreate` (page 6) function to create CFDate objects. You use the `CFDateCompare` (page 5) function to compare two dates, and the `CFDateGetTimeIntervalSinceDate` (page 7) function to compute a time interval. Additional functions for managing dates and times are described in *Time Utilities Reference*

CFDate is "toll-free bridged" with its Core Foundation counterpart, NSDate. What this means is that the Core Foundation type is interchangeable in function or method calls with the bridged Foundation object. In other words, in a method where you see an `NSDate *` parameter, you can pass in a `CFDateRef`, and in a function where you see a `CFDateRef` parameter, you can pass in an NSDate instance. This also applies to concrete subclasses of NSDate. See Interchangeable Data Types for more information on toll-free bridging.

Functions

CFDateCompare

Compares two CFDate objects and returns a comparison result.

```
CFComparisonResult CFDateCompare (
   CFDateRef theDate,
   CFDateRef otherDate,
   void *context
);
```

Parameters

theDate

The date to compare to *otherDate*.

otherDate
The date to compare to *theDate*.

context
Unused. Pass NULL.

Return Value
A CFComparisonResult value that indicates whether *theDate* is equal to, less than, or greater than *otherDate*.

Availability
Available in CarbonLib v1.0 and later.
Available in Mac OS X v10.0 and later.

Declared In
CFDate.h

CFDateCreate

Creates a CFDate object given an absolute time.

```
CFDateRef CFDateCreate (
   CFAllocatorRef allocator,
   CFAbsoluteTime at
);
```

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

at
The absolute time to convert to a CFDate object.

Return Value
A date object that represents the absolute time *at*. Ownership follows the Create Rule.

Discussion
CFDate objects must always be created using absolute time. Time intervals are not supported.

Availability
Available in CarbonLib v1.0 and later.
Available in Mac OS X v10.0 and later.

Related Sample Code
CFPrefTopScores
NSOperationSample

Declared In
CFDate.h

CFDateGetAbsoluteTime

Returns a CFDate object's absolute time.

```
CFAbsoluteTime CFDateGetAbsoluteTime (
   CFDateRef theDate
);
```

Parameters

theDate

The date to examine.

Return Value

The absolute time of *theDate*.

Discussion

Absolute time is measured in seconds relative to the absolute reference date of Jan 1 2001 00:00:00 GMT. A positive value represents a date after the reference date, a negative value represents a date before it. For example, the absolute time -32940326 is equivalent to December 16th, 1999 at 17:54:34.

Availability

Available in CarbonLib v1.0 and later.

Available in Mac OS X v10.0 and later.

Declared In

CFDate.h

CFDateGetTimeIntervalSinceDate

Returns the number of elapsed seconds between the given CFDate objects.

```
CFTimeInterval CFDateGetTimeIntervalSinceDate (
   CFDateRef theDate,
   CFDateRef otherDate
);
```

Parameters

theDate

The date to compare to *otherDate*.

otherDate

The date to compare to *theDate*.

Return Value

The number of elapsed seconds between *theDate* and *otherDate*. The result is positive if *theDate* is later than *otherDate*.

Availability

Available in CarbonLib v1.0 and later.

Available in Mac OS X v10.0 and later.

Declared In

CFDate.h

CFDateGetTypeID

Returns the type identifier for the CFDate opaque type.

```
CFTypeID CFDateGetTypeID (
   void
);
```

Return Value
The type identifier for the CFDate opaque type.

Availability
Available in CarbonLib v1.0 and later.
Available in Mac OS X v10.0 and later.

Related Sample Code
CFFTPSample
CFPrefTopScores

Declared In
`CFDate.h`

Data Types

CFDateRef

A reference to an immutable CFDate object.

```
typedef const struct __CFDate *CFDateRef;
```

Availability
Available in Mac OS X v10.0 and later.

Declared In
`CFDate.h`

Document Revision History

This table describes the changes to *CFDate Reference*.

Date	Notes
2005-12-06	Corrected links to companion documentation.
	Corrected links to companion documentation.
2005-08-11	Cosmetic changes to conform to documentation guidelines.
2003-08-01	Added link to Carbon-Cocoa integration document.
2003-01-01	First version of this document.

Document Revision History

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