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# ISyncFiltering Protocol Reference

Data Management: Syncing



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# ISyncFiltering Protocol Reference

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<b>Conforms to</b>	NSCoding
<b>Framework</b>	/System/Library/Frameworks/SyncServices.framework
<b>Availability</b>	Available in Mac OS X v10.4 and later.
<b>Companion guide</b>	Sync Services Programming Guide
<b>Declared in</b>	ISyncFilter.h
<b>Related sample code</b>	People

## Overview

ISyncFiltering is a protocol implemented by objects that filter records for a client. A client can filter the records it pulls from the sync engine using these objects. Before a record is pulled by a client, the sync engine passes it to each filter associated with the client. A filter can then accept or reject the record. If a filter rejects a record, it is not passed to the client.

For example, a user might want to sync only contacts with phone numbers to their mobile phone. The filter for the phone client would examine each contact and reject it if the contact has no phone number.

Use the `setFilters:ISyncClient` method to set the filters for a client. The sync engine archives the filters so that they persist after the client process terminates. Because the filters persist, they must conform to the NSCoding protocol. In addition, any process that loads the filters using the `filters:ISyncClient` method must have the classes for those filters. When the set of filters changes, all records for a client must be re-filtered to determine if they need to be pulled during the next sync. This is a potentially computationally expensive operation, so only change filters when necessary.

### Note

You can use the ISyncFilter class methods to combine multiple filters into a single filter using logical AND or OR binary operators on a set of filters.

## Tasks

### Testing for Equality

- `isEqual`: (page 6) *required method*  
Returns YES if the receiver and `anotherFilter` are equal, NO otherwise. (required)

### Getting Supported Entities

- `supportedEntityNames` (page 7) *required method*  
Returns an array of entity names that this filter supports. (required)

### Filtering Records

- `shouldApplyRecord:withRecordIdentifier:` (page 7) *required method*  
Returns YES if the client should pull `record` uniquely identified by `recordIdentifier`, NO otherwise. (required)

## Instance Methods

### **isEqual:**

Returns YES if the receiver and `anotherFilter` are equal, NO otherwise. (required)

```
- (BOOL)isEqual:(id)anotherFilter
```

### **Discussion**

When setting a filter using the `setFilters:ISyncClient` method, the sync engine uses this method to compare the new filter with the previous filter (if there is one). If the filters are not equal, the sync engine recomputes all records that should be pushed to a client.

When setting filters, the sync engine compares the new filters with the old filters using `isEqual:.` If a filter has changed, the sync engine must refilter all the client's records—an expensive operation. Therefore, it's important that this implementation returns NO only if two filters differ in such a way that the records need to be refiltered.

### **Availability**

Available in Mac OS X v10.4 and later.

### **Declared In**

`ISyncFilter.h`

## **shouldApplyRecord:withRecordIdentifier:**

Returns YES if the client should pull *record* uniquely identified by *recordIdentifier*, NO otherwise. (required)

```
- (BOOL)shouldApplyRecord:(NSDictionary *)record withRecordIdentifier:(NSString *)recordIdentifier
```

### **Discussion**

This is the method that implements the actual filtering logic.

### **Availability**

Available in Mac OS X v10.4 and later.

### **Declared In**

ISyncFilter.h

## **supportedEntityNames**

Returns an array of entity names that this filter supports. (required)

```
- (NSArray *)supportedEntityNames
```

### **Discussion**

This filter is used only to filter records of the supported entities. An exception is raised if this method returns an empty array or nil.

### **Availability**

Available in Mac OS X v10.4 and later.

### **Related Sample Code**

People

### **Declared In**

ISyncFilter.h



# Document Revision History

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This table describes the changes to *ISyncFiltering Protocol Reference*.

Date	Notes
2007-07-11	First publication of this content as a separate document.

## REVISION HISTORY

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