ISyncChange Class Reference

Cocoa > Syncing

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Apple Inc.
1 Infinite Loop
Cupertino, CA 95014
408-996-1010

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ISyncChange Class Reference

Inherits from	NSObject
Conforms to	NSObject (NSObject)
Framework	/System/Library/Frameworks/SyncServices.framework
Availability	Available in Mac OS X v10.4 and later.
Companion guide	Sync Services Programming Guide
Declared in	ISyncChange.h
Related sample code	People SeeMyFriends StickiesExample

Overview

An ISyncChange object encapsulates a set of changes to a single record such as adding, deleting, and modifying a record. You use ISyncChange objects to push your changes to the sync engine. Similarly, you pull ISyncChange objects from the sync engine when applying sync engine changes.

You use the `changeWithType:recordIdentifier:changes:` (page 6) method to create an ISyncChange object specifying the type of change (an add, delete, or modify), the identifier for the record that changed, and the new property values if any. Use the `pushChange:` ISyncSession method to push the change to the sync engine. You can also use the `deleteRecordWithIdentifier:` ISyncSession method to delete a record without needing to create an ISyncChange object.

Use the `changeEnumeratorForEntityNames:` ISyncSession method to pull changes from the sync engine. Use the returned object enumerator to process each ISyncChange object. Use the `type` (page 8) method to each ISyncChange object to get the type of change (add, modify or delete), the `recordIdentifier` (page 8) method to get the record identifier, and the `changes` (page 7) method get descriptions of the change.

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Tasks

Creating and Initializing Instances

`+ changeWithType:recordIdentifier:changes:` (page 6)
Creates an ISyncChange object.

`- initWithChangeType:recordIdentifier:changes:` (page 7)
Initializes an ISyncChange object.

Getting Attributes

`- type` (page 8)
Returns the type of change the receiver represents.

`- recordIdentifier` (page 8)
Returns the unique record identifier for the record that changed.

`- record` (page 8)
Returns a dictionary representation of the record that changed.

`- changes` (page 7)
Returns an array of changes made to the record.

Class Methods

changeWithType:recordIdentifier:changes:

Creates an ISyncChange object.

```
+ (id)changeWithType:(ISyncChangeType)type recordIdentifier:(NSString
    *)recordIdentifier changes:(NSArray *)changes
```

Discussion
Creates and returns an ISyncChange object of the type specified by *type*, for the record identified by *recordIdentifier*, and with the changes specified by *changes*. The *type* argument should be one of the `ISyncChangeTypeAdd` (page 9), `ISyncChangeTypeModify` (page 9) or `ISyncChangeTypeDelete` (page 9) constants. The *changes* array encapsulates multiple property changes to a single record—it is expected to contain dictionaries that use the keys described in "Constants" (page 9). Each dictionary in the array encapsulates the change to a single property and specifies the property name, action, and new value if applicable. Use this method to create changes for pushing to the sync engine. Use the `pushChange:` ISyncSession method to push the change to the sync engine.

Availability
Available in Mac OS X v10.4 and later.

Declared In
`ISyncChange.h`

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Instance Methods

changes

Returns an array of changes made to the record.

```
- (NSArray *)changes
```

Discussion
Returns an array of the changes made to the record returned by `record` (page 8) with the identifier returned by `recordIdentifier` (page 8). The changes array encapsulates multiple property changes to a single record. The returned array contains dictionaries with keys specifying the type of change to a property and its new value. See "Constants" (page 9) for a description of the keys used in these dictionaries. See `ISyncChangePropertyValueKey` (page 10) for a description of the value of relationship properties. Returns `nil` if the change type is `ISyncChangeTypeDelete`.

Availability
Available in Mac OS X v10.4 and later.

See Also
`- type` (page 8)

Related Sample Code
StickiesExample

Declared In
`ISyncChange.h`

initWithChangeType:recordIdentifier:changes:

Initializes an ISyncChange object.

```
- (id)initWithChangeType:(ISyncChangeType)type recordIdentifier:(NSString
    *)recordIdentifier changes:(NSArray *)changes
```

Discussion
Initializes an ISyncChange object of the type specified by *type*, for the record identified by *recordIdentifier*, and with the changes specified by *changes*. The type argument should be one of the `ISyncChangeTypeAdd` (page 9), `ISyncChangeTypeModify` (page 9) or `ISyncChangeTypeDelete` (page 9) constants. The *changes* array encapsulates multiple property changes to a single record—it is expected to contain dictionaries that use the keys described in "Constants" (page 9). Each dictionary encapsulates the change to a single property and specifies the property name, action, and new value if applicable. Use this method to create changes for pushing to the sync engine. Use the `pushChange:` ISyncSession method to push the change to the sync engine. This is the designated initializer for this class.

Availability
Available in Mac OS X v10.4 and later.

Declared In
`ISyncChange.h`

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record

Returns a dictionary representation of the record that changed.

```
- (NSDictionary *)record
```

Discussion
The dictionary contains a key-value pair for each property unless the value of a property is unspecified. Only changes created by the sync engine have an associated record. Returns `nil` if the client created the receiver to push changes, or this is a delete change.

When pulling changes, this method returns a copy of the record as it appears in the truth database. Only those properties supported by the client are included in this record. Use the `changes` (page 7) method to get the changes made to this record, and use the `recordIdentifier` (page 8) method to get the record's unique identifier.

Availability
Available in Mac OS X v10.4 and later.

Related Sample Code
People
StickiesExample

Declared In
`ISyncChange.h`

recordIdentifier

Returns the unique record identifier for the record that changed.

```
- (NSString *)recordIdentifier
```

Discussion
Returns the unique identifier for the record returned by `record` (page 8), or the record identifier you specified when creating the receiver. Use the `changes` (page 7) method to get the changes that were made to this record.

Availability
Available in Mac OS X v10.4 and later.

Related Sample Code
People
SeeMyFriends
StickiesExample

Declared In
`ISyncChange.h`

type

Returns the type of change the receiver represents.

```
- (ISyncChangeType)type
```


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Discussion
Returns whether or not this change was an add, delete or modify. See "Constants" (page 9) for a description of the possible return values.

Availability
Available in Mac OS X v10.4 and later.

See Also
- changes (page 7)

Declared In
ISyncChange.h

Constants

The following constants are used to determine the type of change. Use one of these values to set the *type* argument when creating an ISyncChange object using either the changeWithType:recordIdentifier:changes: (page 6) class method or the initWithChangeType:recordIdentifier:changes: (page 7) instance method. The type (page 8) method also returns one of these values.

Constant	Description
ISyncChangeTypeAdd	Indicates a record was added. Available in Mac OS X v10.4 and later. Declared in ISyncChange.h.
ISyncChangeTypeModify	Indicates a record was modified. Available in Mac OS X v10.4 and later. Declared in ISyncChange.h.
ISyncChangeTypeDelete	Indicates a record was deleted. Available in Mac OS X v10.4 and later. Declared in ISyncChange.h.

The following constants are used as keys for individual property changes encapsulated in an ISyncChange object. When pushing changes, use these keys to set key-value pairs for dictionaries you add to the *changes* argument passed to either the changeWithType:recordIdentifier:changes: (page 6) class method or the initWithChangeType:recordIdentifier:changes: (page 7) instance method. When pulling changes, you also use these keys to get the attributes of each change. Use the object enumerator returned by the changes (page 7) method to iterate through the changes array.

Constant	Description
ISyncChangeProperty-ActionKey	Specifies whether or not the property is being set or deleted. The value for this key should be either ISyncChangePropertySet or ISyncChangePropertyClear described below.

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Constant	Description
`ISyncChangePropertyNameKey`	Key for the name of the property.
`ISyncChangePropertyValueKey`	Key for the new value of the property. Not used if the action is `ISyncChangePropertyClear`. However, the absence of this key does not imply the property is being deleted. This key-value pair may be omitted if the value is unspecified. You can also set the value to `nil`. If the property is a relationship, then the value is an array of record identifiers belonging to the destination objects. If the relationship is to-one, this array contains a single record identifier.

The following constants are possible values for the `ISyncChangePropertyActionKey` (page 9) key used to describe the type of change to single property.

Constant	Description
`ISyncChangePropertySet`	Indicates the property was modified.
`ISyncChangePropertyClear`	Indicates the property was deleted.

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Document Revision History

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

Date	Notes
2006-06-30	First publication of this content as a separate document.

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