
ISyncRecordSnapshot Class Reference

Data Management: Syncing



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

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ISyncRecordSnapshot 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	ISyncRecordSnapshot.h
Related sample code	SeeMyFriends

Overview

The `ISyncRecordSnapshot` class provides a client with access to an immutable copy of the records in the truth database. The truth database is an aggregate of all records of all supported entities and properties of all registered clients. `ISyncRecordSnapshot` provides a variety of methods for querying the records in the snapshot.

There is no mutable variant of `ISyncRecordSnapshot` for changing records—only the sync engine updates the truth by clients pushing records during a sync session. If the sync engine modifies records after a snapshot is created, the snapshot does not contain those changes. You must create a new snapshot to get the latest records.

Use the `snapshotOfRecordsInTruthWithEntityNames:usingIdentifiersForClient:ISyncManager` method to create a snapshot of the truth database. Use the `recordsWithIdentifiers:` (page 8) method to get a dictionary representation of all the specified records where the keys in the returned dictionary are the record identifiers. For example, a configuration tool might create a snapshot to query records in the truth database and provide various filtering.

However, if you are syncing and want a snapshot that is consistent with the sync session (for example, another client is pushing changes that you have not pulled yet), then you need to use the `snapshotOfRecordsInTruth:ISyncSession` method to get a snapshot.

Other methods in this class are used to query the snapshot. Use the `recordsWithIdentifiers:` (page 8) method to get specific records (it is more efficient to request records in batches, not all at once). Use the `recordsWithMatchingAttributes:` (page 8) method to get records that match specific attribute values, and the `sourceIdentifiersForRelationshipName:withTargetIdentifier:` (page 8) or `targetIdentifiersForRelationshipName:withSourceIdentifier:` (page 9) method to get records that match relationship values. Because all of these query methods can be computationally intensive, use them with care.

You can also use an `ISyncRecordReference` object to maintain a persistent reference to a record. Use the `recordReferenceForRecordWithIdentifier:` (page 7) method to get an `ISyncRecordReference` object.

Tasks

Getting Records

- `recordsWithIdentifiers:` (page 8)
Returns a dictionary containing the records.

Getting Records in a Relationship

- `targetIdentifiersForRelationshipName:withSourceIdentifier:` (page 9)
Returns an array of record identifiers belonging to the target objects of a relationship.
- `sourceIdentifiersForRelationshipName:withTargetIdentifier:` (page 8)
Returns an array of the record identifiers belonging to the source objects of a relationship.

Searching for Records

- `recordsWithMatchingAttributes:` (page 8)
Returns a dictionary containing all the records that match a query.

Getting Record References

- `recordReferenceForRecordWithIdentifier:` (page 7)
Returns a record reference that corresponds to the given record identifier.
- `recordIdentifierForReference:isModified:` (page 6)
Returns the record identifier that corresponds to the given record reference object.

Instance Methods

recordIdentifierForReference:isModified:

Returns the record identifier that corresponds to the given record reference object.

- `(NSString *)recordIdentifierForReference:(ISyncRecordReference *)reference isModified:(BOOL *)modifyFlag`

Parameters*reference*

Specifies the record reference object corresponding to the returned record identifier. This method may change internal properties of this object. Use the *modifyFlag* argument to determine if this object changes.

modifyFlag

Optional flag used to determine if this method changes any properties of *reference*. For example, if internal properties change since *reference* was created or since this method was last invoked, this method updates *reference* and sets *modifyFlag* accordingly. If *modifyFlag* is non-NULL and *reference* changes then *modifyFlag* is set to YES . Otherwise, if *modifyFlag* is non-NULL then it is set to NO.

Return Value

Returns the record identifier corresponding to the specified ISyncRecordReference *reference* argument. The returned identifier is in the scope of the receiver. For example, if the receiver is a global snapshot, then the returned record identifier is a global identifier. Returns `nil` if no record exists that corresponds to *reference*.

Discussion

Typically, a client archives record reference objects and unarchives them before syncing. The client uses this method to get the local record identifiers for the archived record references. If the original record is not present in the truth database then this method returns the record identifier for the record that matches the identity properties. If more than one record matches the identity properties, then this method returns the record identifier of the first record found.

If the record reference was unarchived before invoking this method, it may be stale and need to be modified internally. In this case, use the *modifyFlag* argument in this method and if the record reference changes, save it again. This insures that the most current record reference objects are used in subsequent syncs.

Availability

Available in Mac OS X v10.5 and later.

Declared In

ISyncRecordSnapshot.h

recordReferenceForRecordWithIdentifier:

Returns a record reference that corresponds to the given record identifier.

```
- (ISyncRecordReference *)recordReferenceForRecordWithIdentifier:(NSString *)identifier
```

Parameters*identifier*

A record identifier that is in the scope of the receiver. For example, if the receiver was created using the `snapshotOfRecordsInTruth` ISyncSession method, then *identifier* must be a global identifier. If the receiver was created using the `snapshotOfRecordsInTruthWithEntityNames:usingIdentifiersForClient:` ISyncManager method, then *identifier* must be in the scope of the client.

Return Value

Returns the record reference associated with *identifier*. Returns `nil` if no record can be found for *identifier*.

Availability

Available in Mac OS X v10.5 and later.

Declared In

ISyncRecordSnapshot.h

recordsWithIdentifiers:

Returns a dictionary containing the records.

```
- (NSDictionary *)recordsWithIdentifiers:(NSArray *)recordIdentifiers
```

Discussion

Returns a dictionary containing the records specified by *recordIdentifiers*, an array of record identifiers. The dictionary keys are the record identifiers, and the values are the record dictionaries. The returned dictionary does not contain key-value pairs for deleted records or invalid record identifiers.

Availability

Available in Mac OS X v10.4 and later.

Declared In

ISyncRecordSnapshot.h

recordsWithMatchingAttributes:

Returns a dictionary containing all the records that match a query.

```
- (NSDictionary *)recordsWithMatchingAttributes:(NSDictionary *)attributes
```

Discussion

The *attributes* argument specifies the query and supports key-value pairs for record properties. For example, a key might be `firstName` and a value might be "Jane" in the *attributes* dictionary. Optionally, you can use the `ISyncRecordEntityNameKey` key to limit the search to a particular entity. The keys in the returned dictionary are the record identifiers, and the values are the record dictionaries that match the query.

Availability

Available in Mac OS X v10.4 and later.

Declared In

ISyncRecordSnapshot.h

sourceIdentifiersForRelationshipName:withTargetIdentifier:

Returns an array of the record identifiers belonging to the source objects of a relationship.

```
- (NSArray *)sourceIdentifiersForRelationshipName:(NSString *)relationshipName
withTargetIdentifier:(NSString *)targetIdentifier
```

Discussion

Returns an array of the record identifiers of the source objects belonging to the relationship, specified by *relationshipName*, whose target object identifier is *targetIdentifier*. You can use this method to get the inverse of a to-many or to-one relationship when that relationship is not defined in the schema.

Availability

Available in Mac OS X v10.4 and later.

See Also

- [targetIdentifiersForRelationshipName:withSourceIdentifier:](#) (page 9)

Declared In

ISyncRecordSnapshot.h

targetIdentifiersForRelationshipName:withSourceIdentifier:

Returns an array of record identifiers belonging to the target objects of a relationship.

```
- (NSArray *)targetIdentifiersForRelationshipName:(NSString *)relationshipName
  withSourceIdentifier:(NSString *)sourceIdentifier
```

Discussion

Returns an array of the record identifiers of the target objects belonging to the relationship, specified by *relationshipName*, whose source object identifier is *sourceIdentifier*. If *relationshipName* is a to-one relationship, then the returned array contains no more than one object, otherwise it may contain multiple objects. If the relationship is ordered, the order of the record identifiers matches the order of the records. A record identifier may appear in the array multiple times. Use this method if you want to resolve the destination objects of a relationship.

Availability

Available in Mac OS X v10.4 and later.

See Also

- [sourceIdentifiersForRelationshipName:withTargetIdentifier:](#) (page 8)

Declared In

ISyncRecordSnapshot.h

Document Revision History

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

Date	Notes
2006-07-07	First publication of this content as a separate document. Updated for Mac OS X v10.5.

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