ISyncSessionDriver Class Reference

Data Management: Syncing

2009-03-16

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Simultaneously published in the United States and Canada.

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ISyncSessionDriver Class Reference

Inherits from	NSObject
Conforms to	NSObject (NSObject)
Framework	/System/Library/Frameworks/SyncServices.framework
Availability	Available in Mac OS X v10.5 and later.
Companion guide	Sync Services Programming Guide
Declared in	ISyncSessionDriver.h
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Overview

An `ISyncSessionDriver` object encapsulates the complex process of syncing client records. Using `ISyncSessionDriver` is an alternative approach to creating and managing your own `ISyncClient` and `ISyncSession` objects. The driver takes care of the details by creating a client, registering schemas, and managing sync sessions. An `ISyncSessionDriver` object can be used for multiple sync operations.

An `ISyncSessionDriver` object uses an application-supplied data source object to provide application-specific information needed to manage a sync session. For example, during a sync session, a data source supplies records or changes to push and applies pulled changes to local records. Some data source methods are required and others are optional.

The driver also sends callback messages to a delegate before and after most phases of a sync session. A delegate may implement these callback methods to customize the behavior of sync sessions. For example, a delegate might verify changes, resolve relationships, and perform some local database operations. If no delegate is specified, the driver sends the delegate messages to the data source.

You create an `ISyncSessionDriver` object using the `sessionDriverWithDataSource:` (page 7) method, passing a data source as the argument. The `sessionDriverWithDataSource:` (page 7) method raises an exception if a data source does not implement required methods. Optionally, set the delegate to a different object using the `setDelegate:` (page 10) method. All delegate methods are optional.

You perform a sync operation by sending `sync` (page 11) or `startAsynchronousSync:` (page 11) to an `ISyncSessionDriver` object. These methods perform all the phases of a sync operation: negotiating, pushing, mingling, and pulling. You can access the `ISyncClient` and `ISyncSession` objects directly using the `client` (page 7) and `session` (page 9) methods. However, `session` (page 9) returns `nil` if there is no active sync session.

An `ISyncSessionDriver` object takes care of finishing and canceling a sync session. Therefore, you should not send `finishSyncing` or `cancelSyncing` directly to an `ISyncSession` object returned by the `session` (page 9) method. Instead, send `finishSyncing` (page 8) to an `ISyncSessionDriver` object to prematurely finish a sync session. If an error occurs during syncing, send `lastError` (page 9) to the driver to get an `NSError` object describing the error.

See *ISyncSessionDriverDataSource Protocol Reference* for how to create a data source object and *ISyncSessionDriverDelegate Protocol Reference* for a description of the delegate methods.

Tasks

Creating a Session Driver

`+ sessionDriverWithDataSource:` (page 7)
Creates and returns a new driver object with the specified data source object.

Syncing

`- sync` (page 11)
Syncs client records, specified by the data source, with the sync engine.

`- startAsynchronousSync:` (page 11)
Syncs client records, specified by the data source, in a separate thread.

`- finishSyncing` (page 8)
Notifies the sync engine that the client is done syncing.

Error Handling

`- lastError` (page 9)
Returns the error that occurred during the last sync session.

Getting and Setting Properties

`- dataSource` (page 8)
Returns the data source object for the receiver.

`- setDelegate:` (page 10)
Sets the receiver's delegate to the specified object.

`- delegate` (page 8)
Returns the receiver's delegate.

`- client` (page 7)
Returns the client object used by the receiver to perform the sync operation.

`- session` (page 9)
Returns the session object used to manage the sync session.

- `setHandlesSyncAlerts:` (page 10)
  Specifies whether the receiver should handle sync alerts.
- `handlesSyncAlerts` (page 9)
  Returns a Boolean value indicating whether the receiver handles sync alerts.

Class Methods

sessionDriverWithDataSource:

Creates and returns a new driver object with the specified data source object.

```
+ (ISyncSessionDriver *)sessionDriverWithDataSource:(id <
    ISyncSessionDriverDataSource >)dataSource
```

Discussion
The *dataSource* argument must conform to the `ISyncSessionDriverDataSource` protocol. This method may raise an exception if required methods are not implemented. The `sync` (page 11) method sends messages to both the data source and delegate objects during a sync operation. If a delegate is not specified, then the data source also receives delegate messages.

Availability
Available in Mac OS X v10.5 and later.

See Also
- `dataSource` (page 8)
- `sync` (page 11)

Related Sample Code
SimpleStickies

Declared In
`ISyncSessionDriver.h`

Instance Methods

client

Returns the client object used by the receiver to perform the sync operation.

```
- (ISyncClient *)client
```

Availability
Available in Mac OS X v10.5 and later.

Declared In
`ISyncSessionDriver.h`

dataSource

Returns the data source object for the receiver.

```
- (id < ISyncSessionDriverDataSource >)dataSource
```

Availability
Available in Mac OS X v10.5 and later.

See Also
`+ sessionDriverWithDataSource:` (page 7)

Declared In
`ISyncSessionDriver.h`

delegate

Returns the receiver's delegate.

```
- (id)delegate
```

Availability
Available in Mac OS X v10.5 and later.

See Also
`- setDelegate:` (page 10)

Declared In
`ISyncSessionDriver.h`

finishSyncing

Notifies the sync engine that the client is done syncing.

```
- (void)finishSyncing
```

Discussion
Invoking this method closes any open transactions in the pushing or pulling states. You should use this method to prematurely finish a sync session. Do not send `finishSyncing` directly to an `ISyncSession` object returned by the `session` (page 9) method.

Availability
Available in Mac OS X v10.5 and later.

See Also
`- session` (page 9)
`- sync` (page 11)

Declared In
`ISyncSessionDriver.h`

handlesSyncAlerts

Returns a Boolean value indicating whether the receiver handles sync alerts.

```
- (BOOL)handlesSyncAlerts
```

Return Value
`YES` if the receiver handles sync alerts; otherwise, `NO`.

Discussion
By default, a session driver does not handle sync sessions. Use the `setHandlesSyncAlerts:` (page 10) method to turn this feature on or off.

Availability
Available in Mac OS X v10.5 and later.

See Also
- `setHandlesSyncAlerts:` (page 10)

Declared In
`ISyncSessionDriver.h`

lastError

Returns the error that occurred during the last sync session.

```
- (NSError *)lastError
```

Discussion
Typically, you use this method to get the error if `sync` (page 11) returns `NO` or the sync session started by the `startAsynchronousSync:` (page 11) method fails. The value returned is only valid until the start of the next sync session. Get the last error as follows:

```
BOOL success = [sessionDriver sync];
if (success == NO) myError = [sessionDriver lastError];
```

Availability
Available in Mac OS X v10.5 and later.

See Also
- `startAsynchronousSync:` (page 11)
- `sync` (page 11)

Related Sample Code
SimpleStickies

Declared In
`ISyncSessionDriver.h`

session

Returns the session object used to manage the sync session.

```
- (ISyncSession *)session
```

Discussion
Typically, you use this method to check whether a sync session is in progress. Session objects returned from this method are valid only during the invocation of the `sync` (page 11) method when a sync session is in progress. Otherwise, this method returns `nil`. If you retain a session object returned by this method, it is no longer valid after the `sync` method returns or after one of these delegate methods is invoked:

```
sessionDriverDidFinishSession:
sessionDriverDidCancelSession:
```

Use this method only during the same thread as the `sync` method.

You should not send `finishSyncing` or `cancelSyncing` directly to an `ISyncSession` object returned by this method. Send `finishSyncing` to an `ISyncSessionDriver` object to prematurely finish a sync session. Return an `NSError` object as one of the arguments to a delegate method to cancel a sync session.

Availability
Available in Mac OS X v10.5 and later.

See Also
- `sync` (page 11)
- `finishSyncing` (page 8)

Declared In
`ISyncSessionDriver.h`

setDelegate:

Sets the receiver's delegate to the specified object.

```
- (void)setDelegate:(id)delegate
```

Discussion
The messages sent to a delegate are described in "Creating a Session Driver." The delegate doesn't need to implement all of these methods. If no delegate is set or the *`delegate`* argument is `nil`, delegate messages are sent to the data source object instead.

Availability
Available in Mac OS X v10.5 and later.

See Also
- `delegate` (page 8)
+ `sessionDriverWithDataSource:` (page 7)

Declared In
`ISyncSessionDriver.h`

setHandlesSyncAlerts:

Specifies whether the receiver should handle sync alerts.

```
- (void)setHandlesSyncAlerts:(BOOL)flag
```

Parameters

flag

If YES, the receiver should handle sync alerts; otherwise, the receiver doesn't handle sync alerts.

Discussion

A session driver may optionally handle sync alerts for a client. If the session driver handles sync alerts, then it registers a sync alert handler and receives notifications for requests to join sync sessions. When the session driver receives a request, it initiates a sync session as if the `startAsynchronousSync:` (page 11) method was invoked by the client so it doesn't sync in the main thread. By default, a session driver does not handle sync sessions.

Availability

Available in Mac OS X v10.5 and later.

See Also

- `startAsynchronousSync:` (page 11)
- `handlesSyncAlerts` (page 9)
- `sync` (page 11)

Declared In

`ISyncSessionDriver.h`

startAsynchronousSync:

Syncs client records, specified by the data source, in a separate thread.

```
- (BOOL)startAsynchronousSync:(NSError **)outError
```

Discussion

This method is similar to the `sync` (page 11) method but returns immediately while performing a sync session asynchronously. Use the delegate methods described in "Creating a Session Driver" (page 6) if you want to perform some operations at different phases during the sync session including receiving notification when the sync session is finished or cancelled. If the driver is unable to create a sync session, this method returns NO and the *outError* argument is set to an `NSError` object describing the error; otherwise, this method returns YES.

Availability

Available in Mac OS X v10.5 and later.

See Also

- `sync` (page 11)
- `finishSyncing` (page 8)

Declared In

`ISyncSessionDriver.h`

sync

Syncs client records, specified by the data source, with the sync engine.

```
- (BOOL)sync
```

Discussion
This method registers a client, registers schemas, and manages an entire sync session. It begins a sync session, negotiates a sync mode, pushes records, pulls records, and ends the sync session. During a sync session the data source is expected to supply records or changes to push and to apply pulled changes to local records. Optionally, use the delegate methods described in "Creating a Session Driver" (page 6) if you want to perform some operations at different phases during the sync session. Use the `finishSyncing` (page 8) method to cancel a sync session started by this method. This method returns `YES` if the sync session is successful; otherwise, `NO`.

Availability
Available in Mac OS X v10.5 and later.

See Also
- `startAsynchronousSync:` (page 11)
- `finishSyncing` (page 8)

Declared In
`ISyncSessionDriver.h`

Document Revision History

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

Date	Notes
2009-03-16	Moved delegate methods to ISyncSessionDriverDelegate Protocol Reference.
2007-07-11	New document that describes the ISyncSessionDriver class.

Document Revision History

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