

initWithDatabaseContext:  
Opening and closing a channel openChannel

refreshObject:  
cancelFetch  
setCurrentEntity:

Getting the adaptor channel adaptorChannel

Getting the database context databaseContext

Setting the delegate setDelegate:  
delegate

(EOAdaptorChannel \*)adaptorChannel

Returns the EOAdaptorChannel used by the EODatabaseChannel for communication with the data

<sup>a</sup>Working with the Adaptor Channel<sup>o</sup> in the class description for information on safely using an EO  
adaptor channel.

(void)cancelFetch

Cancels any fetch in progress.

isFetchInProgress, selectObjectsDescribedByQualifier:fetchOrder:, fetchWithZone:

(void)closeChannel

Closes the EODatabaseChannel so that it can't perform operations with the server. Any fetch in progress  
the channel's database context has outstanding transactions, however, the result depends on the server.  
servers immediately roll back all outstanding transactions while others wait until the user logs out.

openChannel, nestedTransactions (EODatabaseContext)

(EODatabaseContext \*)databaseContext

Returns the EODatabaseContext that controls transactions for the EODatabaseChannel.

delegate

Returns the EODatabaseChannel's delegate.

(BOOL)deleteObject:anEO

Deletes the row in the database server corresponding to anEO. Returns YES if successful, NO if not.  
deletion may fail are:

· anEO is nil.

fetchWithZone:(NSZone \*)zone

Fetches and returns the next object in the result set produced by a selectObjectsDescribedByQualifier message returns nil if there are no more objects in the current result set or if an error occurs. If the EODatabase performs uniquing and the object fetched already exists, it's simply sent the new value. The channel creates a new enterprise object.

To create a new enterprise object, the database channel allocates an instance of the enterprise object being fetched. The channel then initializes the object with initWithPrimaryKey:entity: if it implements otherwise simply with an init message. To set the object's values the channel sends it a takeValuesFromDictionary: message with the fetched row as the argument, and finishes off with an awakeForDatabaseChannel: message (see the EODatabaseChannelNotification informal protocol specification).

If an enterprise object matching the next selected object has already been uniqued by the EODatabaseChannel, that object is sent takeValuesFromDictionary: and awakeForDatabaseChannel: messages with the values with those just fetched. If the uniqued object's values differ from those fetched, an ambiguous description of the databaseChannel:willRefetchConflictingObject:withSnapshot: delegate message is sent to see how such a situation is handled.

This method invokes the delegate methods databaseChannel:willFetchObjectOfClass:withZone: and databaseChannel:didFetchObject:, and may invoke either databaseChannel:willRefetchObject:fromSnapshot: or databaseChannel:willRefetchConflictingObject:withSnapshot:.

objectForPrimaryKey:entity: (EODatabase and EODatabaseContext), takeValuesFromDictionary: (EODatabaseChannel) informal protocol)

initWithDatabaseContext:(EODatabaseContext \*)aDatabaseContext

Initializes a newly allocated EODatabaseChannel with aDatabaseContext as the EODatabaseContext. The channel automatically opens the channel. The new EODatabaseChannel retains aDatabaseContext. This is the standard initializer for the EODatabaseChannel class. Returns self, or nil if no more channels can be associated with aDatabaseContext.  
openChannel

(BOOL)insertObject:anEO

Attempts to insert anEO's simple (nonflattened, nonderived) attribute values as a row into the database. Returns YES if successful and NO if not. If anEO is successfully inserted, the receiver's database context updates its snapshot with recordObject:primaryKey:snapshot:. Raises NSInvalidArgumentException if anEO is not an EOEntity or EOfault class specification for information on faults).

Some of the reasons insertion may fail are:

- anEO is nil.
- The receiver's EODatabaseContext has no transaction in progress.
- anEO's EOEntity has a read-only attribute that the server requires be set.
- A primary key can't be determined for anEO.
- The database doesn't allow insertion.
- The receiver's delegate disallows insertion.

Note that read-only attributes are silently unmodified, but if the server requires such an attribute to be set, an error will occur.

This method invokes the delegate methods databaseChannel:willInsertObject: and databaseChannel:didInsertObject:.

(BOOL)isOpen

Returns YES if the channel has been successfully opened with openChannel, NO if not.

(BOOL)lockObject:anEO

Locks anEO for update. Fetches the properties composing anEO's snapshot and compares the fetched values stored in the snapshot. Returns YES if all values are the same fails and returns NO if any of them returns NO under the following conditions:

- anEO's entity is read-only.
- The channel's database context has no transaction in progress.
- The database server or its adaptor doesn't support locking.

This method invokes the delegate methods databaseChannel:willLockObject: and databaseChannel:objectIsReadOnly (EOEntity)

(BOOL)openChannel

Puts the channel and both its context and database into a state where they are ready to perform operations on success and NO on failure. You shouldn't attempt to open an already open channel.

closeChannel

(BOOL)refetchObject:anEO

Refetches the object for anEO's primary key from the database server. anEO is modified by this method on success, NO on failure for any reason (specifically, if there's a fetch in progress). May also raise NSInternalInconsistencyException under the conditions described for the delegate method databaseChannel:willRefetchConflictingObject:withSnapshot:.

Some possible reasons for failure are:

- anEO is nil.
- No snapshot for anEO exists.
- The receiver's EODatabaseContext has no transaction in progress.
- The database channel has a fetch in progress.

This method invokes the delegate methods databaseChannel:willRefetchObject: and databaseChannel:objectIsFetchInProgress and may invoke databaseChannel:willRefetchConflictingObject:withSnapshot:.

isFetchInProgress, takeValuesFromDictionary: (EOKeyValueCoding informal protocol)

(BOOL)selectObjectsDescribedByQualifier:(EOQualifier \*)aQualifier  
fetchOrder:(NSArray \*)fetchOrder

databaseChannel:didSelectObjectsDescribedByQualifier:fetchOrder:.

fetchWithZone:

(void)setCurrentEntity:(EOEntity \*)anEntity

Sets the entity used when fetching enterprise objects. Subsequent fetchWithZone: messages during create an object of the class associated with anEntity. If you perform a select operation in the database channel's adaptor channel, you should set the proper entity before having the EODatabaseChannel select the rows. See "Working with the Adaptor Channel" in the class description for an example.

This method is invoked automatically when you use selectObjectsDescribedByQualifier:fetchOrder:

(void)setDelegate:anObject

Sets the EODatabaseChannel's delegate to anObject.

(BOOL)updateObject:anEO

Updates the row in the database corresponding to anEO. Returns YES if successful, NO if not. Some failure are:

- anEO is nil.
- The receiver's EODatabaseContext has no transaction in progress.
- A primary key can't be determined for anEO (because no snapshot was recorded).
- No record for anEO's primary key exists in the database.
- anEO's EOEntity is read-only.
- anEO's EOEntity has a read-only attribute that the server requires be set.
- The update strategy of the receiver's EODatabaseContext doesn't permit the update.
- The receiver's delegate disallows the update.

Note that read-only attributes are silently unmodified, but if the server requires such an attribute to be updated, an error will occur.

This method invokes the delegate methods databaseChannel:willUpdateObject: and databaseChannel:objectIsReadOnly (EOEntity)

(void)databaseChannel:channel didDeleteObject:anEO

Invoked after channel has deleted anEO from the database.

(void)databaseChannel:channel didFetchObject:anEO

Invoked after channel has fetched anEO from the database.

(void)databaseChannel:channel didSelectObjectsDescribedByQualifier:(EOQualifier \*)aQualifier  
(NSArray \*)fetchOrder

Invoked after channel has selected objects described by aQualifier with fetchOrder.

(void)databaseChannel:channel didUpdateObject:anEO

Invoked after channel has updated anEO in the database.

(Class)databaseChannel:channel failedToLookupClassNamed:(const char \*)name

Invoked when channel has failed to find a class with the given name in the run-time system. The delegate can search for the class in an external module if needed and return the named class. If the delegate returns nil or doesn't implement this method, EOGenericRecord is used.

className (EOEntity)

(EORelationship \*)databaseChannel:channel  
relationshipForRow:(NSDictionary \*)aRow  
relationship:(EORelationship \*)aRelationship

Invoked when a relationship is instantiated on a newly fetched object. aRow contains the values for the object that was fetched, and aRelationship is the relationship about to be set up. The delegate can use the information in aRow to determine which entity the destination of the relationship should be associated with, and return a relationship object or nil. aRelationship as needed.

This method allows you to reuse the same column in a table for different kinds of relationships based on the object. For example, suppose you have one table containing two kinds of

```
(void)databaseChannel:channel  
willFetchObjectOfClass:(Class)class  
withZone:(NSZone *)zone
```

Invoked before channel fetches an object.

```
databaseChannel:channel willInsertObject:anEO
```

Invoked before channel inserts anEO. The delegate may return a substitute object to insert or nil to

```
(BOOL)databaseChannel:channel willLockObject:anEO
```

Invoked before channel locks anEO. The delegate may return YES to allow anEO to be locked or NO to

```
(NSDictionary *)databaseChannel:channel  
willRefetchConflictingObject:anEO  
withSnapshot:(NSDictionary *)snapshot
```

Invoked when channel has fetched new values for anEO, but anEO's current values differ from its previous values. This happens when anEO is updated during a transaction that hasn't been committed. In such a situation, the delegate must return the new potential states, and the database channel can't determine which is valid this usually indicates a problem that requires intervention by the delegate. See "Notifying the Database Channel's Delegate" in the class reference for more information.

If the delegate doesn't implement this method the database channel raises NSInternalInconsistencyException.

```
(NSDictionary *)databaseChannel:channel  
willRefetchObject:anEO  
fromSnapshot:(NSDictionary *)aSnapshot
```

Invoked before channel refreshes anEO with the values in aSnapshot just fetched from the database. The delegate must return aSnapshot, a substitute snapshot, or nil to disallow the operation.

```
(BOOL)databaseChannel:channel willSelectObjectsDescribedByQualifier:(EOQualifier *)aQualifier  
withFetchOrder:(NSArray *)fetchOrder
```

Invoked before channel performs a select operation. The delegate shouldn't modify aQualifier or fetchOrder. If the delegate returns YES the select proceeds if the delegate returns NO the select operation is aborted.

```
databaseChannel:channel willUpdateObject:anEO
```

