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# NSEntityMigrationPolicy Class Reference

Data Management



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

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# NEntityManagerPolicy Class Reference

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<b>Inherits from</b>	NSObject
<b>Conforms to</b>	NSObject (NSObject)
<b>Framework</b>	/System/Library/Frameworks/CoreData.framework
<b>Availability</b>	Available in Mac OS X v10.5 and later.
<b>Companion guide</b>	Core Data Model Versioning and Data Migration Programming Guide
<b>Declared in</b>	NEntityManagerPolicy.h

## Overview

Instances of `NEntityManagerPolicy` customize the migration process for an entity mapping.

You set the policy for an entity mapping by passing the name of the migration policy class as the argument to `setEntityManagerPolicyClassName:` (typically you specify the name in the Xcode mapping model editor).

## Tasks

### Customizing Stages of the Mapping Life Cycle

- [beginEntityMapping:manager:error:](#) (page 6)  
Invoked by the migration manager at the start of a given entity mapping.
- [createDestinationInstancesForSourceInstance:entityMapping:manager:error:](#) (page 6)  
Creates the destination instance(s) for a given source instance.
- [endInstanceCreationForEntityMapping:manager:error:](#) (page 9)  
Indicates the end of the creation stage for the specified entity mapping, and the precursor to the next migration stage.
- [createRelationshipsForDestinationInstance:entityMapping:manager:error:](#) (page 7)  
Constructs the relationships between the newly-created destination instances.
- [endRelationshipCreationForEntityMapping:manager:error:](#) (page 9)  
Indicates the end of the relationship creation stage for the specified entity mapping.

- [performCustomValidationForEntityMapping:manager:error:](#) (page 10)  
Invoked during the validation stage of the entity migration policy, providing the option of performing custom validation on migrated objects.
- [endEntityMapping:manager:error:](#) (page 8)  
Invoked by the migration manager at the end of a given entity mapping.

## Instance Methods

### **beginEntityMapping:manager:error:**

Invoked by the migration manager at the start of a given entity mapping.

- (BOOL)beginEntityMapping:(NSEntityMapping \*)*mapping*  
manager:(NSMigrationManager \*)*manager*  
error:(NSError \*\*)*error*

#### **Parameters**

*mapping*

The mapping object in use.

*manager*

The migration manager performing the migration.

*error*

If an error occurs, upon return contains an NSError object that describes the problem.

#### **Return Value**

YES if the method completes successfully, otherwise NO.

#### **Discussion**

This method is the precursor to the creation stage. In a custom class, you can implement this method to set up any state information that will be useful for the duration of the migration.

#### **Availability**

Available in Mac OS X v10.5 and later.

#### **See Also**

- [createDestinationInstancesForSourceInstance:entityMapping:manager:error:](#) (page 6)
- [endEntityMapping:manager:error:](#) (page 8)

#### **Declared In**

NSEntityMigrationPolicy.h

### **createDestinationInstancesForSourceInstance:entityMapping:manager:error:**

Creates the destination instance(s) for a given source instance.

- (BOOL)createDestinationInstancesForSourceInstance:(NSManagedObject \*)*sInstance*  
entityMapping:(NSEntityMapping \*)*mapping*  
manager:(NSMigrationManager \*)*manager*  
error:(NSError \*\*)*error*

### Parameters

*sInstance*

The source instance for which to create destination instances.

*mapping*

The mapping object in use.

*manager*

The migration manager performing the migration.

*error*

If an error occurs, upon return contains an `NSError` object that describes the problem.

### Return Value

YES if the method completes successfully, otherwise NO.

### Discussion

This method is invoked by the migration manager on each source instance (as specified by the `sourceExpression` in the mapping) to create the corresponding destination instance(s). It also associates the source and destination instances by calling `NSMigrationManager's associateSourceInstance:withDestinationInstance:forEntityMapping: method`.

### Special Considerations

If you override this method and do not invoke `super`, you must invoke `NSMigrationManager's associateSourceInstance:withDestinationInstance:forEntityMapping:` to associate the source and destination instances as required. .

### Availability

Available in Mac OS X v10.5 and later.

### See Also

- [beginEntityMapping:manager:error:](#) (page 6)
- [endInstanceCreationForEntityMapping:manager:error:](#) (page 9)

### Declared In

`NSEntityMigrationPolicy.h`

## **createRelationshipsForDestinationInstance:entityMapping:manager:error:**

Constructs the relationships between the newly-created destination instances.

```
- (BOOL)createRelationshipsForDestinationInstance:(NSManagedObject *)dInstance
    entityMapping:(NSEntityMapping *)mapping manager:(NSMigrationManager *)manager
    error:(NSError **)error
```

### Parameters

*dInstance*

The destination instance for which to create relationships.

*mapping*

The mapping object in use.

*manager*

The migration manager performing the migration.

*error*

If an error occurs, upon return contains an `NSError` object that describes the problem.

**Return Value**

YES if the relationships are constructed correctly, otherwise NO.

**Discussion**

You can use this stage to (re)create relationships between migrated objects—you use the association lookup methods on the `NSMigrationManager` instance to determine the appropriate relationship targets.

**Availability**

Available in Mac OS X v10.5 and later.

**See Also**

- [endInstanceCreationForEntityMapping:manager:error:](#) (page 9)
- [endRelationshipCreationForEntityMapping:manager:error:](#) (page 9)

**Declared In**

`NSEntityMigrationPolicy.h`

**endEntityMapping:manager:error:**

Invoked by the migration manager at the end of a given entity mapping.

```
- (BOOL)endEntityMapping:(NSEntityMapping *)mapping
    manager:(NSMigrationManager *)manager
    error:(NSError **)error
```

**Parameters**

*mapping*

The mapping object in use.

*manager*

The migration manager performing the migration.

*error*

If an error occurs, upon return contains an `NSError` object that describes the problem.

**Return Value**

YES if the method completes correctly, otherwise NO.

**Discussion**

This is the end to the given entity mapping. You can implement this method to perform any clean-up at the end of the migration (from any of the three phases of the mapping).

**Availability**

Available in Mac OS X v10.5 and later.

**See Also**

- [performCustomValidationForEntityMapping:manager:error:](#) (page 10)
- [beginEntityMapping:manager:error:](#) (page 6)

**Declared In**

`NSEntityMigrationPolicy.h`



**endInstanceCreationForEntityMapping:manager:error:**

Indicates the end of the creation stage for the specified entity mapping, and the precursor to the next migration stage.

```
- (BOOL)endInstanceCreationForEntityMapping:(NSEntityMapping *)mapping
      manager:(NSMigrationManager *)manager
      error:(NSError **)error
```

**Parameters**

*mapping*

The mapping object in use.

*manager*

The migration manager performing the migration.

*error*

If an error occurs, upon return contains an `NSError` object that describes the problem.

**Return Value**

YES if the relationships are constructed correctly, otherwise NO.

**Discussion**

You can override this method to clean up state from the creation of destination or to prepare state for the creation of relationships.

**Availability**

Available in Mac OS X v10.5 and later.

**See Also**

- [createDestinationInstancesForSourceInstance:entityMapping:manager:error:](#) (page 6)
- [createRelationshipsForDestinationInstance:entityMapping:manager:error:](#) (page 7)

**Declared In**

NSEntityMigrationPolicy.h

**endRelationshipCreationForEntityMapping:manager:error:**

Indicates the end of the relationship creation stage for the specified entity mapping.

```
- (BOOL)endRelationshipCreationForEntityMapping:(NSEntityMapping *)mapping
      manager:(NSMigrationManager *)manager
      error:(NSError **)error
```

**Parameters**

*mapping*

The mapping object in use.

*manager*

The migration manager performing the migration.

*error*

If an error occurs, upon return contains an `NSError` object that describes the problem.

**Return Value**

YES if the method completes correctly, otherwise NO.

**Discussion**

This method is invoked after

[createRelationshipsForDestinationInstance:entityMapping:manager:error:](#) (page 7); you can override it to clean up state from the creation of relationships, or prepare state for custom validation in [performCustomValidationForEntityMapping:manager:error:](#) (page 10).

**Availability**

Available in Mac OS X v10.5 and later.

**See Also**

- [createRelationshipsForDestinationInstance:entityMapping:manager:error:](#) (page 7)
- [performCustomValidationForEntityMapping:manager:error:](#) (page 10)

**Declared In**

NSEntityMigrationPolicy.h

**performCustomValidationForEntityMapping:manager:error:**

Invoked during the validation stage of the entity migration policy, providing the option of performing custom validation on migrated objects.

```
- (BOOL)performCustomValidationForEntityMapping:(NSEntityMapping *)mapping
      manager:(NSMigrationManager *)manager
      error:(NSError **)error
```

**Parameters**

*mapping*

The mapping object in use.

*manager*

The migration manager performing the migration.

*error*

If an error occurs, upon return contains an `NSError` object that describes the problem.

**Return Value**

YES if the method completes correctly, otherwise NO.

**Discussion**

This method is called before the default save validation is performed by the framework.

If you implement this method, you must manually obtain the collection of objects you are interested in validating.

**Availability**

Available in Mac OS X v10.5 and later.

**See Also**

- [endRelationshipCreationForEntityMapping:manager:error:](#) (page 9)
- [endEntityMapping:manager:error:](#) (page 8)

**Declared In**

NSEntityMigrationPolicy.h

## Constants

### Value Expression Keys

Keys used in value expression right hand sides.

```
NSString *NSMigrationManagerKey;
NSString *NSMigrationSourceObjectKey;
NSString *NSMigrationDestinationObjectKey;
NSString *NSMigrationEntityMappingKey;
NSString *NSMigrationPropertyMappingKey;
NSString *NSMigrationEntityPolicyKey;
```

#### Constants

`NSMigrationManagerKey`

**Key for the migration manager.**

To access this key in a custom value expression string in the Xcode mapping model editor use `$manager`.

Available in Mac OS X v10.5 and later.

Declared in `NSEntityMigrationPolicy.h`.

`NSMigrationSourceObjectKey`

**Key for the source object.**

To access this key in a custom value expression string in the Xcode mapping model editor use `$source`.

Available in Mac OS X v10.5 and later.

Declared in `NSEntityMigrationPolicy.h`.

`NSMigrationDestinationObjectKey`

**Key for the destination object.**

To access this key in a custom value expression string in the Xcode mapping model editor use `$destination`.

Available in Mac OS X v10.5 and later.

Declared in `NSEntityMigrationPolicy.h`.

`NSMigrationEntityMappingKey`

**Key for the entity mapping object.**

To access this key in a custom value expression string in the Xcode mapping model editor use `$entityMapping`.

Available in Mac OS X v10.5 and later.

Declared in `NSEntityMigrationPolicy.h`.

`NSMigrationPropertyMappingKey`

**Key for the property mapping object.**

To access this key in a custom value expression string in the Xcode mapping model editor use `$propertyMapping`.

Available in Mac OS X v10.5 and later.

Declared in `NSEntityMigrationPolicy.h`.

`NSMigrationEntityPolicyKey`

Key for the entity migration policy object.

To access this key in a custom value expression string in the Xcode mapping model editor use `$entityPolicy`.

Available in Mac OS X v10.6 and later.

Declared in `NSEntityMigrationPolicy.h`.

**Discussion**

You can use these keys in the right hand sides of a value expression.

# Document Revision History

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

Date	Notes
2010-02-24	Added keys for custom value expression strings to Value Expressions.
2009-05-01	Corrected typographical errors.
2009-02-19	Updated for iOS 3.0.
2008-06-02	Updated for Mac OS X v10.6.
2007-05-22	New document that describes the Core Data class uses to customize the migration process for an entity mapping.

**REVISION HISTORY**

Document Revision History