

[Foundation](#) / NSMetadataQuery

Class

NSMetadataQuery

A query that you perform against Spotlight metadata.

iOS 5.0+ | iPadOS 5.0+ | Mac Catalyst 13.1+ | macOS 10.4+ | tvOS 9.0+ | visionOS 1.0+ | watchOS 2.0+

```
class NSMetadataQuery
```

Overview

The [NSMetadataQuery](#) class encapsulates the functionality provided by the [MDQuery](#) opaque type for querying the Spotlight metadata.

[NSMetadataQuery](#) objects provide metadata query results in several ways:

- As individual attribute values for requested attributes.
- As value lists that contain the distinct values for given attributes in the query results.
- As a result array proxy, containing all the query results. This is suitable for use with Cocoa bindings.
- As a hierarchical collection of results, grouping together items with the same values for specified grouping attributes. This is also suitable for use with Cocoa bindings.

Queries have two phases: the initial gathering phase that collects all currently matching results and a second live-update phase.

By default, the receiver has no limitation on its search scope. Use the [searchScopes](#) property to customize.

By default, notification of updated results occurs at 1.0 seconds. Use the [notificationBatchingInterval](#) property to customize.

You must set a predicate with the [predicate](#) property before starting a query.

Topics

Configuring Queries

`var searchScopes: [Any]`

An array containing the search scopes.

`var predicate: NSPredicate?`

The predicate used to filter query results.

`var sortDescriptors: [NSSortDescriptor]`

An array of sort descriptor objects.

`var valueListAttributes: [String]`

An array of attributes whose values are gathered by the query.

`var groupingAttributes: [String]?`

An array of grouping attributes. (read-only)

`var notificationBatchingInterval: TimeInterval`

The interval at which notification of updated results occurs.

`var delegate: (any NSMetadataQueryDelegate)?`

The query's delegate.

`var searchItems: [Any]?`

An array of objects that define the query's scope.

Running Queries

`var isStarted: Bool`

A Boolean value that indicates whether the query has started. (read-only)

`func start() -> Bool`

Attempts to start the query.

`var isGathering: Bool`

A Boolean value that indicates whether the receiver is in the initial gathering phase of the query. (read-only)

```
var isStopped: Bool
```

A Boolean value that indicates whether the query has stopped.

```
func stop()
```

Stops the receiver's current query from gathering any further results.

Getting Query Results

```
var results: [Any]
```

An array containing the query's results.

```
var resultCount: Int
```

The number of results returned by the query. (read-only)

```
func result(at: Int) -> Any
```

Returns the query result at a specific index.

```
func index(ofResult: Any) -> Int
```

Returns the index of a query result object in the receiver's results array.

```
var groupedResults: [NSMetadataQueryResultGroup]
```

An array containing hierarchical groups of query results. (read-only)

```
class NSMetadataQueryResultGroup
```

The `NSMetadataQueryResultGroup` class represents a collection of grouped attribute results returned by an `NSMetadataQuery` object.

```
func enumerateResults((Any, Int, UnsafeMutablePointer<ObjCBool>) -> Void)
```

Enumerates the current set of results using the given block.

```
func enumerateResults(options: NSEnumerationOptions, using: (Any, Int, UnsafeMutablePointer<ObjCBool>) -> Void)
```

Enumerates the current set of results using the given options and block.

```
var valueLists: [String : [NSMetadataQueryAttributeValueTuple]]
```

A dictionary containing the value lists generated by the query.

```
class NSMetadataQueryAttributeValueTuple
```

The `NSMetadataQueryAttributeValueTuple` class represents attribute-value tuples, which are objects that contain the attribute name and value of a metadata attribute.

```
func value(ofAttribute: String, forResultAt: Int) -> Any?
```

Returns the value for the attribute name `attrName` at the index in the results specified by `idx`.

```
func enableUpdates()
```

Enables updates to the query results.

```
func disableUpdates()
```

Disables updates to the query results.

```
var operationQueue: OperationQueue?
```

The queue on which query result notifications are posted.

Constants

⋮ Metadata Query Search Scopes

Constants for the predefined search scopes used by [searchScopes](#).

⋮ Content Relevance

In addition to including the requested metadata attributes, a query result also includes content relevance, accessed with the following key.

⋮ Keys for Use with a Notification Info Dictionary

Constants for keys to retrieve the collection of changed items from a notification's user info dictionary.

Notifications

```
static let NSMetadataQueryDidFinishGathering: NSNotification.Name
```

Posted when the receiver has finished with the initial result-gathering phase of the query.

```
static let NSMetadataQueryDidStartGathering: NSNotification.Name
```

Posted when the receiver begins with the initial result-gathering phase of the query.

```
static let NSMetadataQueryDidUpdate: NSNotification.Name
```

Posted when the receiver's results have changed during the live-update phase of the query.

```
static let NSMetadataQueryGatheringProgress: NSNotification.Name
```

Posted as the receiver is collecting results during the initial result-gathering phase of the query.

Structures

`struct DidFinishGatheringMessage`

`struct DidStartGatheringMessage`

Relationships

Inherits From

`NSObject`

Conforms To

`CVarArg`

`CustomDebugStringConvertible`

`CustomStringConvertible`

`Equatable`

`Hashable`

`NSObjectProtocol`

See Also

File Search

`protocol NSMetadataQueryDelegate`

An interface that enables the delegate of a metadata query to provide substitute results or attributes.

`class NSMetadataItem`

The metadata associated with a file.