

ARC::FIO

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# Chapter 1

## Class Index

### 1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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## Chapter 2

# Class Index

### 2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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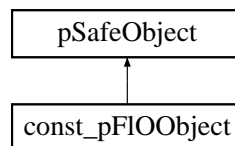


## Chapter 3

# Class Documentation

### 3.1 const\_pFIOObject Class Reference

Inheritance diagram for const\_pFIOObject::



#### Public Member Functions

- **const\_pFIOObject** (const **FIOObject** &o)
- **const\_pFIOObject** (const **FIOObject** \*o)
- **const\_pFIOObject** (const **const\_pFIOObject** &p)
- **const\_pFIOObject** (const **pFIOObject** &p)
- const **FIOObject** & **operator\*** (void) const
- const **FIOObject** \* **operator->** (void) const

The documentation for this class was generated from the following file:

- pointers.h

## 3.2 FIOAttribute Class Reference

### Public Member Functions

- **FIOAttribute** (const std::string &name, bool multi=false)
- **FIOAttribute** (const std::string &name, const std::string &value, bool multi=false)
- **FIOAttribute** (const std::string &name, const std::vector< const std::string > &value)
- const std::string & **name** (void) const
- const std::string & **value** (unsigned int n=0) const
- void **value** (const std::string &v)
- bool **add** (const std::string &v)
- bool **operator==** (const std::string &n) const
- void **serialize** ([XMLNode](#) &x) const

### Static Public Member Functions

- static [FIOAttribute](#) \* **deserialize** (const [XMLNode](#) &x)

The documentation for this class was generated from the following file:

- attribute.h

## 3.3 FIOClient Class Reference

Interface to remote service.

```
#include <client.h>
```

### Public Member Functions

- **FIOClient** ([pFIOServiceRemote](#) s)
- **FIOClient** ([FIOServiceRemote](#) &s)
- bool [registr](#) ([FIOService](#) &s)
- bool [notify](#) (std::list< [FIOMessage](#) > &msgs)

### 3.3.1 Detailed Description

Interface to remote service.

The documentation for this class was generated from the following file:

- client.h

## 3.4 FIOMessage Class Reference

Message sent between services for notification.

```
#include <message.h>
```

### Public Member Functions

- **FIOMessage** ([FIOObject::action\\_t](#) t)
- **FIOMessage** (const [FIOObject](#) &o, [FIOObject::action\\_t](#) t)
- void [serialize](#) (std::string &msg)
- void [operator=](#) ([FIOObject::action\\_t](#) t)
- bool [operator==](#) (const std::string &id) const
- bool [operator==](#) (const [FIOObject](#) &o) const
- bool [operator==](#) (const [pFIOObject](#) p) const
- [FIOObject::action\\_t](#) [type](#) (void) const
- [const\\_pFIOObject](#) [object](#) (void) const

### Static Public Member Functions

- static [FIOMessage](#) \* [deserialize](#) (const std::string &msg)

#### 3.4.1 Detailed Description

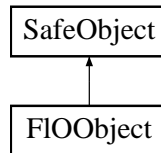
Message sent between services for notification.

The documentation for this class was generated from the following file:

- [message.h](#)

## 3.5 FIOObject Class Reference

`#include <object.h>` Inheritance diagram for FIOObject::



### Public Types

- enum `type_t` { **undefined**, **reference**, **ordinary** }
- enum `action_t` { **unknown**, **created**, **updated**, **deleted** }

### Public Member Functions

- `FIOObject` (const std::string &id, `type_t` t=undefined)
- `FIOObject` (FIOService &service, const std::string &id, `type_t` t=undefined)
- const std::string & **id** (void) const
- `type_t` **type** (void) const
- FIOService \* **service** (void) const
- FIOService \* **service** (FIOService \*s)
- std::vector< FIOAttribute > & **attributes** (void)
- virtual `operator bool` (void)
- virtual bool `operator!` (void)
- virtual void **serialize** (XMLNode &x) const
- virtual void **serialize** (XMLNode &x, FIOMessage &m) const
- virtual void **serialize** (std::string &msg) const
- virtual void **serialize** (std::string &msg, FIOMessage &m) const
- virtual void **notification** (FIOMessage &msg, pFIOServiceRemote rsrv)
- virtual void **maintain** (void)
- virtual void **notification** (FIOService &srv, FIOMessage &msg, pFIOServiceRemote rsrv) const

### Static Public Member Functions

- static void **Register** (deserializer\_t sr)
- static FIOObject \* **deserialize** (const XMLNode &x)
- static FIOObject \* **deserialize** (const XMLNode &x, FIOMessage &m)
- static FIOObject \* **deserialize** (const std::string &msg)
- static FIOObject \* **deserialize** (const std::string &msg, FIOMessage &m)

### Protected Member Functions

- `FIOObject` (const FIOObject &o)

## Protected Attributes

- `std::vector< FIOAttribute > attrs_`

## Friends

- `FIOObject * deserialize_object (const XMLNode &x)`

### 3.5.1 Detailed Description

Class to represent both reference and ordinary objects with specific methods virtual. Real object reimplements one or another set of them.

### 3.5.2 Member Function Documentation

#### 3.5.2.1 `virtual void FIOObject::serialize (XMLNode & x, FIOMessage & m) const` **[virtual]**

Convenience method to convert object into XML tree Real object can reimplement it instead of one using string.

#### 3.5.2.2 `virtual void FIOObject::serialize (XMLNode & x) const` **[virtual]**

Convenience method to convert object into XML tree. Real object can reimplement it instead of one using string.

The documentation for this class was generated from the following file:

- `object.h`

## 3.6 FIORegistration Class Reference

Registration request.

```
#include <message.h>
```

### Public Member Functions

- **FIORegistration** ([FIOService](#) &s)
- [FIOService](#) & **service** (void)
- bool **operator==** (const [FIOService](#) &s) const

### 3.6.1 Detailed Description

Registration request.

The documentation for this class was generated from the following file:

- message.h

## 3.7 FIOService Class Reference

Kind of main class. Represents local service itself.

```
#include <service.h>
```

### Public Member Functions

- **FIOService** (const std::string &url, const std::string &path)
- **operator bool** (void) const
- **bool operator!** (void) const
- const std::string & **url** (void) const
- void **add** (pFIOObject o)
- void **add** (pFIOServiceRemote s)
- void **notify** (const FIOMessage &m)
- void **notification** (FIOMessage &msg, pFIOServiceRemote &srv)
- **pFIOServiceRemote service** (const std::string &id)
- void **registr** (pFIOServiceRemote s)
- **pFIOObject find** (std::string id)
- void **maintain** (void)

### 3.7.1 Detailed Description

Kind of main class. Represents local service itself.

### 3.7.2 Member Function Documentation

#### 3.7.2.1 void FIOService::notify (const FIOMessage & *m*)

Inform registered services about changes (calls corresponding methods of hadled objects)

The documentation for this class was generated from the following file:

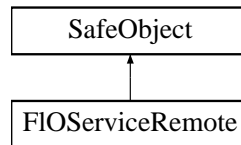
- service.h



## 3.8 FIOServiceRemote Class Reference

Interface to remote service.

`#include <service.h>` Inheritance diagram for FIOServiceRemote::



### Public Member Functions

- **FIOServiceRemote** (const std::string &url, const std::string &id)
- const std::string & **url** (void)
- const std::string & **id** (void)
- void **notify** (const [FIOMessage](#) &m)
- void **registr** ([FIOService](#) &s)
- void **maintain** (void)

### 3.8.1 Detailed Description

Interface to remote service.

The documentation for this class was generated from the following file:

- `service.h`

## 3.9 HTTP\_FIO Class Reference

FIO service as seen by connected client (interface to [FIOService](#) class).

```
#include <flo.h>
```

### Public Member Functions

- **HTTP\_FIO** (HTTP\_Connector \*c, [FIOService](#) &srv)
- virtual HTTP\_Error **get** (const char \*uri, int &keep\_alive)
- virtual HTTP\_Error **put** (const char \*uri, int &keep\_alive)
- virtual void **soap\_methods** (void)

### Friends

- int [nf\\_\\_notification](#) (struct soap \*, int, char \*\*, struct [nf\\_\\_response](#) &)
- int [nf\\_\\_registration](#) (struct soap \*, char \*, char \*, char \*, struct [nf\\_\\_response](#) &)
- int [nf\\_\\_add](#) (struct soap \*, int, char \*\*, struct [nf\\_\\_response](#) &)
- int [nf\\_\\_find](#) (struct soap \*, char \*, char \*, struct [nf\\_\\_object\\_response](#) &)

### 3.9.1 Detailed Description

FIO service as seen by connected client (interface to [FIOService](#) class).

The documentation for this class was generated from the following file:

- flo.h

## 3.10 nf\_\_object\_response Struct Reference

### Public Attributes

- int **error\_code**
- int **sub\_error\_code**
- char \* **error\_description**
- int **\_\_size\_obj**
- char \*\* **obj**

The documentation for this struct was generated from the following file:

- flo\_soap.h

## 3.11 nf\_\_response Struct Reference

### Public Attributes

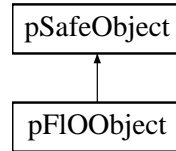
- int **error\_code**
- int **sub\_error\_code**
- char \* **error\_description**

The documentation for this struct was generated from the following file:

- flo\_soap.h

## 3.12 pFLOObject Class Reference

Inheritance diagram for pFLOObject::



### Public Member Functions

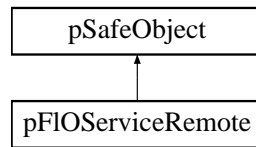
- **pFLOObject** ([FLOObject](#) &o)
- **pFLOObject** ([FLOObject](#) \*o)
- **pFLOObject** (const [pFLOObject](#) &p)
- [FLOObject](#) & **operator\*** (void) const
- [FLOObject](#) \* **operator->** (void) const

The documentation for this class was generated from the following file:

- pointers.h

### 3.13 pFIOServiceRemote Class Reference

Inheritance diagram for pFIOServiceRemote::



#### Public Member Functions

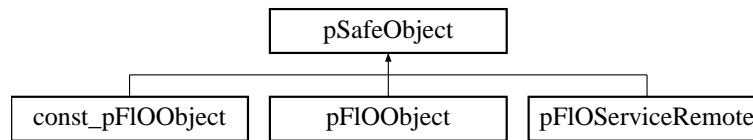
- **pFIOServiceRemote** ([FIOServiceRemote](#) &o)
- **pFIOServiceRemote** ([FIOServiceRemote](#) \*o)
- **pFIOServiceRemote** (const [pFIOServiceRemote](#) &p)
- [FIOServiceRemote](#) & **operator\*** (void) const
- [FIOServiceRemote](#) \* **operator->** (void) const

The documentation for this class was generated from the following file:

- pointers.h

## 3.14 pSafeObject Class Reference

Inheritance diagram for pSafeObject::



### Public Member Functions

- **pSafeObject** ([SafeObject](#) &o)
- **pSafeObject** ([SafeObject](#) \*o)
- **pSafeObject** (const [pSafeObject](#) &p)
- [SafeObject](#) & **operator\*** (void) const
- [SafeObject](#) \* **operator->** (void) const
- void **operator=** ([SafeObject](#) &o)
- void **operator=** ([SafeObject](#) \*o)
- void **operator=** (const [pSafeObject](#) &p)
- **operator bool** (void) const
- bool **operator!** (void) const
- bool **operator==** (const [pSafeObject](#) &p) const
- bool **operator!=** (const [pSafeObject](#) &p) const
- bool **operator==** (const [SafeObject](#) &o) const
- bool **operator!=** (const [SafeObject](#) &o) const

### Protected Attributes

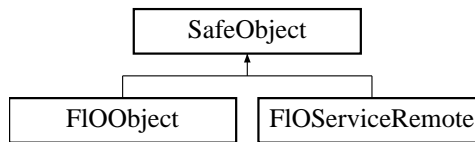
- [SafeObject](#) \* **object\_**

The documentation for this class was generated from the following file:

- common.h

## 3.15 SafeObject Class Reference

Inheritance diagram for SafeObject::



### Friends

- class [pSafeObject](#)

The documentation for this class was generated from the following file:

- common.h



## 3.16 XMLNode Class Reference

```
#include <xmlwrap.h>
```

### Public Member Functions

- [XMLNode](#) (void)
- [XMLNode](#) (const std::string &name)
- [XMLNode](#) (const [XMLNode](#) &node)
- [XMLNode](#) ([XMLNode](#) &parent, const std::string &name)
- [operator bool](#) (void) const
- bool [operator!](#) (void) const
- void [operator=](#) (const [XMLNode](#) &node)
- void [addNode](#) (const [XMLNode](#) &node)
- void [linkNode](#) ([XMLNode](#) &node)
- [XMLNode](#) \* [getNode](#) (int n) const
- [XMLNode](#) \* [getNode](#) (const std::string &name) const
- [XMLNode](#) \* [getNode](#) (const std::string &name, int n) const
- int [nodes](#) (void) const
- std::string [name](#) (void) const
- void [name](#) (const std::string &s)
- std::string [content](#) (void) const
- void [content](#) (const std::string &s)
- std::string [get](#) (void) const
- void [set](#) (const std::string &s)

### 3.16.1 Detailed Description

Wrapper for sophisticated XML management API. Provides very simple, but also very simple to use functionality. There is no separate XML document. Everything is node. This implementation uses libxml2.

### 3.16.2 Member Function Documentation

#### 3.16.2.1 void XMLNode::operator= (const XMLNode & *node*)

Replace this node with a copy of supplied one. This node becomes a top one.

The documentation for this class was generated from the following file:

- xmlwrap.h

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