

Beamlib

3.0.0

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Chapter 1

Main Page

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1.1 Introduction

The Beamlib C++ class library provides a base library for developing real-time and other applications with multi-processor and multi-host support. The Baamlib system has the following features:

- Simple Object based development.
- Simple Object base library for Strings, Lists, Network access etc.
- Support for multi-threaded applications with Mutex Objects etc.
- Usable from C++ and Python.
- IDL based object creation tool allows easy creation of C++ and Python objects from IDL language.
- IDL provides the ability to create SQL database schema automatically.
- Database access that allows BDEV Objects to be stored.
- BOAP (Beam Object Access Protocol) provides a simple, low overhead protocol, that allows access to remote objects using an RPC mechanism.
- Database access via a layer that allows simultaneous access to different database systems including MYSQL and BEAM BDEV native object database.
- Concept of Object domains.

1.2 Components

The Beamlib system is split into the following libraries:

- Base: This is the base class library containing the base 'C++' classes.
- Http: This provides HTTP/HTML classes
- Widgets: This provides Qt widgets to be used on top of the standard Qt widgets.
- Gui: This provides a simple GUI library.
- Gui1: This provides a new version of the simple GUI library.

The Beamlib system uses a few utility programs:

- bidl: This provides an IDL description file to C++ class generator.HTTP/HTML classes
- boapns: This provides a BOAP name server providing a name top object mapping system
- boapnsc: This provides a BOAP name server client for testing

1.3 API Examples

Some simple client examples are listed below:

Chapter 2

Namespace Index

2.1 Namespace List

Here is a list of all namespaces with brief descriptions:

Boapns	11
------------------------	----

Chapter 3

Hierarchical Index

3.1 Class Hierarchy

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

BoapClientObject	
Boapns::Boapns	13

Chapter 4

Class Index

4.1 Class List

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

Boapns::Boapns	
Some more class info2	13

Chapter 5

File Index

5.1 File List

Here is a list of all files with brief descriptions:

BoapnsC.h	17
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Chapter 6

Namespace Documentation

6.1 Boapns Namespace Reference

Classes

- class [Boapns](#)
Some more class info2.

Variables

- const BUInt32 [apiVersion](#) = 0

6.1.1 Variable Documentation

6.1.1.1 apiVersion

```
const BUInt32 Boapns::apiVersion = 0
```


Chapter 7

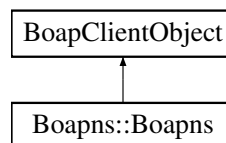
Class Documentation

7.1 Boapns::Boapns Class Reference

Some more class info2.

```
#include <BoapnsC.h>
```

Inheritance diagram for Boapns::Boapns:



Public Member Functions

- [Boapns](#) (BString name="")
- BError [getVersion](#) (BString &version)
Get the [Boapns](#) version.
- BError [getEntryList](#) (BList< BoapEntry > &entryList)
- BError [getEntry](#) (BString name, BoapEntry &entry)
Some more function info.
- BError [addEntry](#) (BoapEntry entry)
- BError [delEntry](#) (BString name)
- BError [getNewName](#) (BString &name)

7.1.1 Detailed Description

Some more class info2.

7.1.2 Constructor & Destructor Documentation

7.1.2.1 Boapns()

```
Boapns::Boapns::Boapns (
    BString name = "" )
```

7.1.3 Member Function Documentation

7.1.3.1 addEntry()

```
BError Boapns::Boapns::addEntry (
    BoapEntry entry )
```

7.1.3.2 delEntry()

```
BError Boapns::Boapns::delEntry (
    BString name )
```

7.1.3.3 getEntry()

```
Boapns::Boapns::getEntry (
    BString name,
    BoapEntry & entry )
```

Some more function info.

Parameters

<i>name</i>	The name of the entry to get
<i>entry</i>	The entry to return

7.1.3.4 getEntryList()

```
BError Boapns::Boapns::getEntryList (
    BList< BoapEntry > & entryList )
```

7.1.3.5 getNewName()

```
BError Boapns::Boapns::getNewName (
    BString & name )
```

7.1.3.6 getVersion()

```
Boapns::Boapns::getVersion (
    BString & version )
```

Get the [Boapns](#) version.

Some more function info.

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

- [BoapnsC.h](#)
- [/src/bdev3/beamlib/doc/beamlib-extra.dox](#)

Chapter 8

File Documentation

8.1 BoapnsC.h File Reference

```
#include <stdlib.h>
#include <stdint.h>
#include <Boap.h>
#include <BString.h>
#include <BList.h>
#include <BArray.h>
#include <BoapnsD.h>
```

Classes

- class [Boapns::Boapns](#)
Some more class info2.

Namespaces

- [Boapns](#)

Variables

- const BUInt32 [Boapns::apiVersion](#) = 0

8.2 /src/bdev3/beamlib/doc/beamlib-extra.dox File Reference

8.3 /src/bdev3/beamlib/doc/overview.dox File Reference

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