

LibBeamApi Reference Manual

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7.40 BRWLock.cpp File Reference	177
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7.42 BSema.cpp File Reference	179
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7.44 BSocket.cpp File Reference	181
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7.46 BString.cpp File Reference	183
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Chapter 1

LibBeamApi Namespace Index

1.1 LibBeamApi Namespace List

Here is a list of all namespaces with brief descriptions:

Boapns	9
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Chapter 2

LibBeamApi Hierarchical Index

2.1 LibBeamApi Class Hierarchy

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

BArray< T >	11
BBuffer	12
BCond	14
BCondBool	15
BCondInt	17
BCondValue	20
BCondWrap	23
BEntry	29
BError	37
BEventError	42
BEvent	40
BEventError	42
BEventInt	43
BEventPipe	45
BFile	47
BIter	51
BList< T >	52
BDir	26
BList< T >::Node	59
BList< BEntry >	52
BEntryList	34
BEntryFile	32
BList< BNameValue< T > >	52
BNameValueList< T >	63
BList< dirent * >	52
BMutex	60
BNameValue< T >	62
Boapns::BoapEntry	68
BoapFuncEntry	69
BoapPacket	71
BoapPacketHead	76
BoapServiceEntry	85

BoapServiceObject	86
BObject	92
BPoll	94
BRefData	97
BRtc	99
BRWLock	103
BSema	105
BSocket	107
BoapClientObject	64
Boapns::Boapns	70
BoapClientObject	64
BoapSignalObject	90
BoapSignalObject	90
BSocketAddress	112
BSocketAddressINET	114
BString	117
BThread	127
BoapServer	77
BoapServerConnection	83
BRtcThreaded	101
BTimer	129
BUrl	132

Chapter 3

LibBeamApi Class Index

3.1 LibBeamApi Class List

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

BArray< T >	11
BBuffer	12
BCond	14
BCondBool (Thread conditional boolean)	15
BCondInt (Thread conditional integer)	17
BCondValue (Thread conditional value)	20
BCondWrap	23
BDir (File system directory class)	26
BEntry (Manipulate a name value pair)	29
BEntryFile (File of Entries)	32
BEntryList (List of Entries. Where an entry is a name value pair)	34
BError (Error return class)	37
BEvent (This class provides a base class for all event objects that can be sent over the events interface)	40
BEventError	42
BEventInt (This class provides an interface for sending simple integer events via a file descriptor. This allows threads to send events that can be picked up by the poll system call)	43
BEventPipe (This class provides a base interface for sending events via a pipe. This allows threads to send events that can be picked up by the poll system call)	45
BFile (File operations class)	47
BIter (Iterator for BList)	51
BList< T > (Template based list class)	52
BList< T >::Node	59
BMutex (Mutex class)	60
BNameValue< T >	62
BNameValueList< T >	63
BoapClientObject	64
Boapns::BoapEntry	68
BoapFuncEntry	69
Boapns::Boapns	70
BoapPacket	71
BoapPacketHead	76
BoapServer	77

BoapServerConnection	83
BoapServiceEntry	85
BoapServiceObject	86
BoapSignalObject	90
BObject	92
BPoll (This class provides an interface for polling a number of file descriptors. It uses round robin polling)	94
BRefData (Referenced data storage)	97
BRtc (Realtime clock)	99
BRtcThreaded (Threaded real time clock)	101
BRWLock (Thread read-write locks)	103
BSema (Semaphore class)	105
BSocket	107
BSocketAddress (Socket Address)	112
BSocketAddressINET (IP aware socket address)	114
BString	117
BThread	127
BTimer (Stopwatch style timer)	129
BUrl (Basic access to a Url)	132

Chapter 4

LibBeamApi File Index

4.1 LibBeamApi File List

Here is a list of all files with brief descriptions:

BArray.h	135
BBuffer.cpp	136
BBuffer.h	137
BCond.cpp	138
BCond.h	139
BCondInt.cpp	140
BCondInt.h	141
BDir.cpp	142
BDir.h	143
BEntry.cpp	144
BEntry.h	145
BError.cpp	146
BError.h	147
BEvent.cpp	148
BEvent.h	149
BFile.cpp	150
BFile.h	151
BList.h	152
BList_func.h	153
BMutex.cpp	154
BMutex.h	155
BNameValue.h	156
Boap.cpp	157
Boap.h	159
BoapnsC.cc	161
BoapnsC.h	162
BoapnsD.cc	163
BoapnsD.h	164
BoapSimple.cc	165
BoapSimple.h	166
BObject.cc	168
BObject.h	169
BPoll-1.cpp	170

BPoll.cpp	171
BPoll.h	172
BRefData.cpp	173
BRefData.h	174
BRtc.cpp	175
BRtc.h	176
BRWLock.cpp	177
BRWLock.h	178
BSema.cpp	179
BSema.h	180
BSocket.cpp	181
BSocket.h	182
BString.cpp	183
BString.h	184
BThread.cpp	185
BThread.h	186
BTimer.cpp	187
BTimer.h	188
BTypes.h	189
BUrl.cpp	192
BUrl.h	193

Chapter 5

LibBeamApi Namespace Documentation

5.1 Boapns Namespace Reference

Classes

- class [Boapns](#)
- class [BoapEntry](#)

Functions

- [Boapns](#) ([BString](#) name)
- [BError](#) getVersion ([BString](#) &version)
- [BError](#) getEntryList ([BList](#)< [BoapEntry](#) > &entryList)
- [BError](#) getEntry ([BString](#) name, [BoapEntry](#) &entry)
- [BError](#) addEntry ([BoapEntry](#) entry)
- [BError](#) delEntry ([BString](#) name)
- [BError](#) getNewName ([BString](#) &name)

Variables

- const [BUInt32](#) apiVersion = 0

5.1.1 Function Documentation

5.1.1.1 BError Boapns::addEntry (BoapEntry *entry*)

5.1.1.2 Boapns::Boapns (BString *name*)

5.1.1.3 BError Boapns::delEntry (BString *name*)

5.1.1.4 BError Boapns::getEntry (BString *name*, BoapEntry & *entry*)

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

5.1.1.6 BError Boapns::getNewName (BString & *name*)

5.1.1.7 BError Boapns::getVersion (BString & *version*)

5.1.2 Variable Documentation

5.1.2.1 const BUInt32 Boapns::apiVersion = 0

Chapter 6

LibBeamApi Class Documentation

6.1 BArray< T > Class Template Reference

```
#include <BArray.h>
```

Public Member Functions

- [BArray \(\)](#)
- [BArray \(BSize size, T value=T\(\)\)](#)
- [BArray \(const BArray &array\)](#)

6.1.1 Detailed Description

template<class T> class BArray< T >

Template based Array class. This is based on the Standard C++ library vector class and has all of the functionality of that class.

6.1.2 Constructor & Destructor Documentation

6.1.2.1 `template<class T> BArray< T >::BArray () [inline]`

6.1.2.2 `template<class T> BArray< T >::BArray (BSize size, T value = T()) [inline]`

6.1.2.3 `template<class T> BArray< T >::BArray (const BArray< T > & array) [inline]`

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

- [BArray.h](#)

6.2 BBuffer Class Reference

```
#include <BBuffer.h>
```

Public Member Functions

- [BBuffer \(\)](#)
Create and manipulate a data buffer. On creation the buffer size defaults to 1024 bytes.
- [~BBuffer \(\)](#)
- [int setSize \(uint32_t size\)](#)
Sets the bufer size.
- [int setData \(const void *data, uint32_t size\)](#)
Sets buffer data resized to contain the data.
- [int writeData \(uint32_t pos, const void *data, uint32_t size\)](#)
Writes data into buffer from offset pos.
- [void * data \(\)](#)
The data.
- [uint32_t size \(\)](#)
Size of the buffer in bytes.

Private Attributes

- [uint32_t osize](#)
- [uint32_t odatasize](#)
- [void * odata](#)

6.2.1 Constructor & Destructor Documentation

6.2.1.1 BBuffer::BBuffer ()

Create and manipulate a data buffer. On creation the buffer size defaults to 1024 bytes.

6.2.1.2 BBuffer::~~BBuffer ()

6.2.2 Member Function Documentation

6.2.2.1 int BBuffer::setSize (uint32_t size)

Sets the bufer size.

6.2.2.2 int BBuffer::setData (const void * data, uint32_t size)

Sets buffer data resized to contain the data.

6.2.2.3 int BBuffer::writeData (uint32_t pos, const void * data, uint32_t size)

Writes data into buffer from offset pos.

6.2.2.4 void * BBuffer::data ()

The data.

6.2.2.5 uint32_t BBuffer::size ()

Size of the buffer in bytes.

6.2.3 Member Data Documentation**6.2.3.1 uint32_t BBuffer::osize [private]****6.2.3.2 uint32_t BBuffer::odatasize [private]****6.2.3.3 void* BBuffer::odata [private]**

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

- [BBuffer.h](#)
- [BBuffer.cpp](#)

6.3 BCond Class Reference

```
#include <BCond.h>
```

Public Member Functions

- [BCond \(\)](#)
Thread conditional variable.
- [~BCond \(\)](#)
- [int signal \(\)](#)
- [int wait \(\)](#)
- [int timedWait \(int timeOutUs\)](#)

Private Attributes

- `pthread_mutex_t` [omutex](#)
- `pthread_cond_t` [ocond](#)

6.3.1 Constructor & Destructor Documentation

6.3.1.1 BCond::BCond ()

Thread conditional variable.

6.3.1.2 BCond::~~BCond ()

6.3.2 Member Function Documentation

6.3.2.1 int BCond::signal ()

6.3.2.2 int BCond::wait ()

6.3.2.3 int BCond::timedWait (int *timeOutUs*)

6.3.3 Member Data Documentation

6.3.3.1 `pthread_mutex_t` BCond::omutex [private]

6.3.3.2 `pthread_cond_t` BCond::ocond [private]

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

- [BCond.h](#)
- [BCond.cpp](#)

6.4 BCondBool Class Reference

Thread conditional boolean.

```
#include <BCondInt.h>
```

Public Member Functions

- [BCondBool \(\)](#)
- [~BCondBool \(\)](#)
- [int set \(\)](#)
Set value. Wakes waiting.
- [int clear \(\)](#)
Clear Value.
- [int value \(\)](#)
Current value.
- [int wait \(\)](#)
Wait until value is true.
- [int timedWait \(int timeOutUs\)](#)
Wait until set, with timeout.

Private Attributes

- `pthread_mutex_t` [omutex](#)
- `pthread_cond_t` [ocond](#)
- `int` [ovalue](#)

6.4.1 Detailed Description

Thread conditional boolean.

6.4.2 Constructor & Destructor Documentation

6.4.2.1 BCondBool::BCondBool ()

6.4.2.2 BCondBool::~~BCondBool ()

6.4.3 Member Function Documentation

6.4.3.1 int BCondBool::set ()

Set value. Wakes waiting.

6.4.3.2 int BCondBool::clear ()

Clear Value.

6.4.3.3 int BCondBool::value ()

Current value.

6.4.3.4 int BCondBool::wait ()

Wait until value is true.

6.4.3.5 int BCondBool::timedWait (int *timeOutUs*)

Wait until set, with timeout.

6.4.4 Member Data Documentation**6.4.4.1 pthread_mutex_t BCondBool::omutex [private]****6.4.4.2 pthread_cond_t BCondBool::ocond [private]****6.4.4.3 int BCondBool::ovalue [private]**

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

- [BCondInt.h](#)
- [BCondInt.cpp](#)

6.5 BCondInt Class Reference

Thread conditional integer.

```
#include <BCondInt.h>
```

Public Member Functions

- [BCondInt](#) ()
- [~BCondInt](#) ()
- void [setValue](#) (int value)
Set value.
- int [increment](#) ()
Increment.
- int [decrement](#) ()
Decrement.
- int [value](#) ()
Current value.
- int [wait](#) ()
Wait until value is 0.
- int [waitIncrement](#) (int timeOutUs=0)
Wait until value is 0 then increment.
- int [waitNotZero](#) ()
Wait until value is not 0.
- int [waitNotZeroDecrement](#) ()
Wait until value is not 0 and then decrement.
- int [tryNotZeroDecrement](#) ()
Test if value is not 0, if not zero then decrement.
- int [timedWait](#) (int timeOutUs)
Wait for the condition, with timeout.
- void [operator++](#) (int)
- void [operator--](#) (int)

Private Attributes

- pthread_mutex_t [omutex](#)
- pthread_cond_t [ocond](#)
- int [ovalue](#)

6.5.1 Detailed Description

Thread conditional integer.

6.5.2 Constructor & Destructor Documentation

6.5.2.1 BCondInt::BCondInt ()

6.5.2.2 BCondInt::~~BCondInt ()

6.5.3 Member Function Documentation

6.5.3.1 void BCondInt::setValue (int *value*)

Set value.

6.5.3.2 int BCondInt::increment ()

Increment.

6.5.3.3 int BCondInt::decrement ()

Decrement.

6.5.3.4 int BCondInt::value ()

Current value.

6.5.3.5 int BCondInt::wait ()

Wait until value is 0.

6.5.3.6 int BCondInt::waitIncrement (int *timeOutUs* = 0)

Wait until value is 0 then increment.

6.5.3.7 int BCondInt::waitNotZero ()

Wait until value is not 0.

6.5.3.8 int BCondInt::waitNotZeroDecrement ()

Wait until value is not 0 and then decrement.

6.5.3.9 int BCondInt::tryNotZeroDecrement ()

Test if value is not 0, if not zero then decrement.

6.5.3.10 int BCondInt::timedWait (int *timeOutUs*)

Wait for the condition, with timeout.

6.5.3.11 void BCondInt::operator++ (int) [inline]

6.5.3.12 void BCondInt::operator-- (int) [inline]

6.5.4 Member Data Documentation

6.5.4.1 pthread_mutex_t BCondInt::omutex [private]

6.5.4.2 pthread_cond_t BCondInt::ocond [private]

6.5.4.3 int BCondInt::ovalue [private]

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

- [BCondInt.h](#)
- [BCondInt.cpp](#)

6.6 BCondValue Class Reference

Thread conditional value.

```
#include <BCondInt.h>
```

Public Member Functions

- [BCondValue](#) ()
- [~BCondValue](#) ()
- void [setValue](#) (int value)
Set the value. Wakes waiting.
- int [value](#) ()
Current value.
- int [increment](#) (int v=1)
Increment. Wakes waiting.
- int [decrement](#) (int v=1)
Decrement. Wakes waiting.
- int [waitMoreThanOrEqual](#) (int v, int decrement=0, int timeOutUs=0)
Wait until value is at least the value given.
- int [waitLessThanOrEqual](#) (int v, int increment=0, int timeOutUs=0)
Wait until value is equal to or below the value given.
- int [waitLessThan](#) (int v, int timeOutUs=0)
Wait until value is equal to or below the value given.
- void [operator+=](#) (int v)
Add to value. Wakes waiting.
- void [operator-=](#) (int v)
Subtract from value. Wakes waiting.
- void [operator++](#) (int)
Increment value. Wakes waiting.
- void [operator--](#) (int)
Decrement value. Wakes waiting.

Private Attributes

- pthread_mutex_t [omutex](#)
- pthread_cond_t [ocond](#)
- int [ovalue](#)

6.6.1 Detailed Description

Thread conditional value.

6.6.2 Constructor & Destructor Documentation

6.6.2.1 BCondValue::BCondValue ()

6.6.2.2 BCondValue::~~BCondValue ()

6.6.3 Member Function Documentation

6.6.3.1 void BCondValue::setValue (int *value*)

Set the value. Wakes waiting.

6.6.3.2 int BCondValue::value ()

Current value.

6.6.3.3 int BCondValue::increment (int *v* = 1)

Increment. Wakes waiting.

6.6.3.4 int BCondValue::decrement (int *v* = 1)

Decrement. Wakes waiting.

6.6.3.5 int BCondValue::waitMoreThanOrEqual (int *v*, int *decrement* = 0, int *timeOutUs* = 0)

Wait until value is at least the value given.

6.6.3.6 int BCondValue::waitLessThanOrEqual (int *v*, int *increment* = 0, int *timeOutUs* = 0)

Wait until value is equal to or below the value given.

6.6.3.7 int BCondValue::waitLessThan (int *v*, int *timeOutUs* = 0)

Wait until value is equal to or below the value given.

6.6.3.8 void BCondValue::operator+= (int *v*) [inline]

Add to value. Wakes waiting.

6.6.3.9 void BCondValue::operator-= (int *v*) [inline]

Subtract from value. Wakes waiting.

6.6.3.10 void BCondValue::operator++ (int) [inline]

Increment value. Wakes waiting.

6.6.3.11 void BCondValue::operator-- (int) [inline]

Decrement value. Wakes waiting.

6.6.4 Member Data Documentation**6.6.4.1 pthread_mutex_t BCondValue::omutex [private]****6.6.4.2 pthread_cond_t BCondValue::ocond [private]****6.6.4.3 int BCondValue::ovalue [private]**

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

- [BCondInt.h](#)
- [BCondInt.cpp](#)

6.7 BCondWrap Class Reference

```
#include <BCondInt.h>
```

Public Member Functions

- [BCondWrap](#) ()
- [~BCondWrap](#) ()
- void [setValue](#) (uint32_t value)
Set the value. Wakes waiting.
- uint32_t [value](#) ()
Current value.
- uint32_t [increment](#) (uint32_t v=1)
Increment. Wakes waiting.
- uint32_t [decrement](#) (uint32_t v=1)
Decrement. Wakes waiting.
- int [waitMoreThanOrEqual](#) (uint32_t v, uint32_t decrement=0, uint32_t timeOutUs=0)
Wait until value is at least the value given.
- int [waitLessThanOrEqual](#) (uint32_t v, uint32_t increment=0, uint32_t timeOutUs=0)
Wait until value is equal to or below the value given.
- int [waitLessThan](#) (uint32_t v, uint32_t timeOutUs=0)
Wait until value is equal to or below the value given.
- void [operator+=](#) (int v)
Add to value. Wakes waiting.
- void [operator-=](#) (int v)
Subtract from value. Wakes waiting.
- void [operator++](#) (int)
Increment value. Wakes waiting.
- void [operator--](#) (int)
Decrement value. Wakes waiting.

Private Member Functions

- int [diff](#) (uint32_t v)

Private Attributes

- pthread_mutex_t [omutex](#)
- pthread_cond_t [ocond](#)
- uint32_t [ovalue](#)

6.7.1 Constructor & Destructor Documentation

6.7.1.1 BCondWrap::BCondWrap ()

6.7.1.2 BCondWrap::~~BCondWrap ()

6.7.2 Member Function Documentation

6.7.2.1 void BCondWrap::setValue (uint32_t *value*)

Set the value. Wakes waiting.

6.7.2.2 uint32_t BCondWrap::value ()

Current value.

6.7.2.3 uint32_t BCondWrap::increment (uint32_t *v* = 1)

Increment. Wakes waiting.

6.7.2.4 uint32_t BCondWrap::decrement (uint32_t *v* = 1)

Decrement. Wakes waiting.

6.7.2.5 int BCondWrap::waitMoreThanOrEqual (uint32_t *v*, uint32_t *decrement* = 0, uint32_t *timeOutUs* = 0)

Wait until value is at least the value given.

6.7.2.6 int BCondWrap::waitLessThanOrEqual (uint32_t *v*, uint32_t *increment* = 0, uint32_t *timeOutUs* = 0)

Wait until value is equal to or below the value given.

6.7.2.7 int BCondWrap::waitLessThan (uint32_t *v*, uint32_t *timeOutUs* = 0)

Wait until value is equal to or below the value given.

6.7.2.8 void BCondWrap::operator+= (int *v*) [inline]

Add to value. Wakes waiting.

6.7.2.9 void BCondWrap::operator-= (int v) [inline]

Subtract from value. Wakes waiting.

6.7.2.10 void BCondWrap::operator++ (int) [inline]

Increment value. Wakes waiting.

6.7.2.11 void BCondWrap::operator- (int) [inline]

Decrement value. Wakes waiting.

6.7.2.12 int BCondWrap::diff (uint32_t v) [private]**6.7.3 Member Data Documentation****6.7.3.1 pthread_mutex_t BCondWrap::omutex [private]****6.7.3.2 pthread_cond_t BCondWrap::ocond [private]****6.7.3.3 uint32_t BCondWrap::ovalue [private]**

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

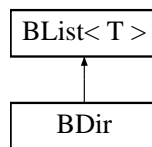
- [BCondInt.h](#)
- [BCondInt.cpp](#)

6.8 BDir Class Reference

File system directory class.

```
#include <BDir.h>
```

Inheritance diagram for BDir::



Public Member Functions

- [BDir](#) ()
- [BDir](#) ([BString](#) name)
- [~BDir](#) ()
- [BError open](#) ([BString](#) name)
Reads named directory.
- [BError error](#) ()
Current value of error.
- [BError read](#) ()
read/re-reads directory
- void [clear](#) ()
Clears list.
- void [setWild](#) ([BString](#) wild)
Set wildcard filter string used on read.
- void [setSort](#) (int on)
Set alpha sort on/off.
- [BString entryName](#) ([BIter](#) i)
Get filename.
- struct stat [entryStat](#) ([BIter](#) i)
Get file stats.
- struct stat64 [entryStat64](#) ([BIter](#) i)
Get file stats 64.

Private Attributes

- [BError oerror](#)
- [BString odirname](#)
- [BString owild](#)
- [int osort](#)

6.8.1 Detailed Description

File system directory class.

6.8.2 Constructor & Destructor Documentation

6.8.2.1 BDir::BDir ()

6.8.2.2 BDir::BDir (BString *name*)

6.8.2.3 BDir::~~BDir ()

6.8.3 Member Function Documentation

6.8.3.1 BError BDir::open (BString *name*)

Reads named directory.

6.8.3.2 BError BDir::error ()

Current value of error.

6.8.3.3 BError BDir::read ()

read/re-reads directory

6.8.3.4 void BDir::clear () [virtual]

Clears list.

Reimplemented from [BList< T >](#).

6.8.3.5 void BDir::setWild (BString *wild*)

Set wildcard filter string used on read.

6.8.3.6 void BDir::setSort (int *on*)

Set alpha sort on/off.

6.8.3.7 BString BDir::entryName (BIter *i*)

Get filename.

6.8.3.8 struct stat BDir::entryStat (BIter *i*) [read]

Get file stats.

6.8.3.9 struct stat64 BDir::entryStat64 (BIter *i*) [read]

Get file stats 64.

6.8.4 Member Data Documentation**6.8.4.1 BError BDir::oerror** [private]**6.8.4.2 BString BDir::odirname** [private]**6.8.4.3 BString BDir::owild** [private]**6.8.4.4 int BDir::osort** [private]

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

- [BDir.h](#)
- [BDir.cpp](#)

6.9 BEntry Class Reference

Manipulate a name value pair.

```
#include <BEntry.h>
```

Public Member Functions

- [BEntry](#) ()
- [BEntry](#) ([BString](#) name, [BString](#) value)
Set name and value.
- [BEntry](#) ([BString](#) line)
Set name and value from white space delimited string.
- [BString](#) [getName](#) ()
Get the name.
- [BString](#) [getValue](#) ()
Get the value.
- void [setLine](#) ([BString](#) line)
Set name and value from white space delimited string.
- void [setName](#) ([BString](#) name)
Set the name.
- void [setValue](#) ([BString](#) value)
Set the value.
- [BString](#) [line](#) ()
Return name and value as padded single string.
- void [print](#) ()
Print name and value.

Private Attributes

- [BString](#) [oname](#)
- [BString](#) [ovalue](#)

6.9.1 Detailed Description

Manipulate a name value pair.

6.9.2 Constructor & Destructor Documentation

6.9.2.1 BEntry::BEntry ()

6.9.2.2 BEntry::BEntry (BString *name*, BString *value*)

Set name and value.

6.9.2.3 BEntry::BEntry (BString *line*)

Set name and value from white space delimited string.

6.9.3 Member Function Documentation

6.9.3.1 BString BEntry::getName ()

Get the name.

6.9.3.2 BString BEntry::getValue ()

Get the value.

6.9.3.3 void BEntry::setLine (BString *line*)

Set name and value from white space delimited string.

6.9.3.4 void BEntry::setName (BString *name*)

Set the name.

6.9.3.5 void BEntry::setValue (BString *value*)

Set the value.

6.9.3.6 BString BEntry::line ()

Return name and value as padded single string.

6.9.3.7 void BEntry::print ()

Print name and value.

6.9.4 Member Data Documentation

6.9.4.1 BString BEntry::oname [private]

6.9.4.2 BString BEntry::ovalue [private]

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

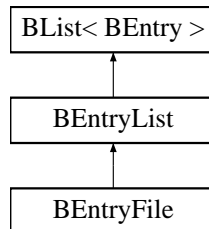
- [BEntry.h](#)
- [BEntry.cpp](#)

6.10 BEntryFile Class Reference

File of Entries.

```
#include <BEntry.h>
```

Inheritance diagram for BEntryFile::



Public Member Functions

- [BEntryFile](#) ()
- [BEntryFile](#) ([BString](#) filename)
Opens entryfile.
- [~BEntryFile](#) ()
- int [open](#) ([BString](#) filename)
Opens entryfile.
- int [read](#) ()
Reads entry file and builds list.
- int [write](#) ()
Writes list to entryfile.
- int [writeList](#) ([BEntryList](#) &l)
Writes specified list to file.
- void [clear](#) ()
Clears current list.

Private Attributes

- [BString](#) ofilename
- [BString](#) ocomments

6.10.1 Detailed Description

File of Entries.

6.10.2 Constructor & Destructor Documentation

6.10.2.1 BEntryFile::BEntryFile ()

6.10.2.2 BEntryFile::BEntryFile (BString *filename*)

Opens entryfile.

6.10.2.3 BEntryFile::~~BEntryFile ()

6.10.3 Member Function Documentation

6.10.3.1 int BEntryFile::open (BString *filename*)

Opens entryfile.

6.10.3.2 int BEntryFile::read ()

Reads entry file and builds list.

6.10.3.3 int BEntryFile::write ()

Writes list to entryfile.

6.10.3.4 int BEntryFile::writeList (BEntryList & *l*)

Writes specified list to file.

6.10.3.5 void BEntryFile::clear () [virtual]

Clears current list.

Reimplemented from [BEntryList](#).

6.10.4 Member Data Documentation

6.10.4.1 BString BEntryFile::ofilename [private]

6.10.4.2 BString BEntryFile::ocomments [private]

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

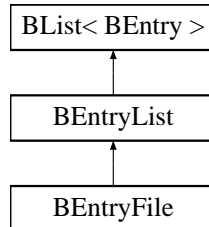
- [BEntry.h](#)
- [BEntry.cpp](#)

6.11 BEntryList Class Reference

List of Entries. Where an entry is a name value pair.

```
#include <BEntry.h>
```

Inheritance diagram for BEntryList::



Public Member Functions

- [BEntryList](#) ()
- [int isSet](#) ([BString](#) name)
1 if name is in list and value is set
- [BEntry *](#) [find](#) ([BString](#) name)
Returns entry if name is found otherwise NULL.
- [BString](#) [findValue](#) ([BString](#) name)
Returns value of name. Returns "" if name not found.
- [int setValue](#) ([BString](#) name, [BString](#) value)
Set the value of name. Returns 0 if name not found.
- [int setValueRaw](#) ([BString](#) name, [BString](#) value)
Raw setting of value without looking up existing entry.
- [void deleteEntry](#) ([BString](#) name)
Deletes the entry.
- [void print](#) ()
Print list.
- [BString](#) [getString](#) ()
Return list as string. Each Entry padded and on a new line.
- [void insert](#) ([BIter](#) &i, const [BEntry](#) &item)
Insert item before item.
- [void del](#) ([BIter](#) &i)
Delete specified item.
- [void clear](#) ()
Clear the list.

Private Attributes

- [BIter olastPos](#)

6.11.1 Detailed Description

List of Entries. Where an entry is a name value pair.

6.11.2 Constructor & Destructor Documentation

6.11.2.1 BEntryList::BEntryList ()

6.11.3 Member Function Documentation

6.11.3.1 int BEntryList::isSet (BString *name*)

1 if name is in list and value is set

6.11.3.2 BEntry * BEntryList::find (BString *name*)

Returns entry if name is found otherwise NULL.

6.11.3.3 BString BEntryList::findValue (BString *name*)

Returns value of name. Returns "" if name not found.

6.11.3.4 int BEntryList::setValue (BString *name*, BString *value*)

Set the value of name. Returns 0 if name not found.

6.11.3.5 int BEntryList::setValueRaw (BString *name*, BString *value*)

Raw setting of value without looking up existing entry.

6.11.3.6 void BEntryList::deleteEntry (BString *name*)

Deletes the entry.

6.11.3.7 void BEntryList::print ()

Print list.

6.11.3.8 BString BEntryList::getString ()

Return list as string. Each Entry padded and on a new line.

6.11.3.9 void BEntryList::insert (BIter & *i*, const BEntry & *item*) [virtual]

Insert item before item.

Reimplemented from [BList< BEntry >](#).

6.11.3.10 void BEntryList::del (BIter & *i*) [virtual]

Delete specified item.

Reimplemented from [BList< BEntry >](#).

6.11.3.11 void BEntryList::clear () [virtual]

Clear the list.

Reimplemented from [BList< BEntry >](#).

Reimplemented in [BEntryFile](#).

6.11.4 Member Data Documentation**6.11.4.1 BIter BEntryList::olastPos** [private]

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

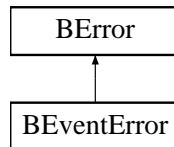
- [BEntry.h](#)
- [BEntry.cpp](#)

6.12 BError Class Reference

Error return class.

```
#include <BError.h>
```

Inheritance diagram for BError::



Public Types

- enum `Type` { `NONE` = 0, `ERROR` = 1 }

Public Member Functions

- `BError` (int errNo=`NONE`, `BString` errStr="")
Create object.
- `BError` (`BString` errStr)
Create with error set and error string.
- `BError` copy ()
Return an independant copy.
- `BError` & `set` (int errNo, `BString` errStr="")
Set error number and message.
- `BError` & `setError` (`BString` errStr="")
Set error type ERROR with optional message.
- `BString` `getString` () const
Get error message.
- int `getErrorNo` () const
Get The error number.
- `operator int` () const
Return error number.

Private Attributes

- int `oerrNo`
- `BString` `oerrStr`

6.12.1 Detailed Description

Error return class.

6.12.2 Member Enumeration Documentation

6.12.2.1 enum BError::Type

Enumerator:

NONE

ERROR

6.12.3 Constructor & Destructor Documentation

6.12.3.1 BError::BError (int *errNo* = NONE, BString *errStr* = " ")

Create object.

6.12.3.2 BError::BError (BString *errStr*)

Create with error set and error string.

6.12.4 Member Function Documentation

6.12.4.1 BError BError::copy ()

Return an independant copy.

6.12.4.2 BError & BError::set (int *errNo*, BString *errStr* = " ")

Set error number and message.

6.12.4.3 BError & BError::setError (BString *errStr* = " ")

Set error type ERROR with optional message.

6.12.4.4 BString BError::getString () const

Get error message.

6.12.4.5 int BError::getErrorNo () const

Get The error number.

6.12.4.6 BError::operator int () const

Return error number.

6.12.5 Member Data Documentation

6.12.5.1 int BError::oerrNo [private]

6.12.5.2 BString BError::oerrStr [private]

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

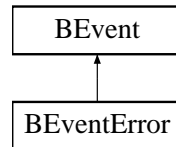
- [BError.h](#)
- [BError.cpp](#)

6.13 BEvent Class Reference

This class provides a base class for all event objects that can be sent over the events interface.

```
#include <BEvent.h>
```

Inheritance diagram for BEvent::



Public Member Functions

- [BEvent](#) (uint32_t type)
- virtual [~BEvent](#) ()
- uint32_t [getType](#) ()
- virtual [BError](#) [getBinary](#) (void *data, uint32_t &size)
- virtual [BError](#) [setBinary](#) (void *data, uint32_t &size)

Private Attributes

- uint32_t [otype](#)
The event type.

6.13.1 Detailed Description

This class provides a base class for all event objects that can be sent over the events interface.

6.13.2 Constructor & Destructor Documentation

6.13.2.1 [BEvent::BEvent](#) (uint32_t type)

6.13.2.2 [BEvent::~~BEvent](#) () [virtual]

6.13.3 Member Function Documentation

6.13.3.1 [uint32_t BEvent::getType](#) ()

6.13.3.2 [BError BEvent::getBinary](#) (void * data, uint32_t & size) [virtual]

Reimplemented in [BEventError](#).

6.13.3.3 [BError BEvent::setBinary](#) (void * data, uint32_t & size) [virtual]

Reimplemented in [BEventError](#).

6.13.4 Member Data Documentation

6.13.4.1 `uint32_t BEvent::otype` [private]

The event type.

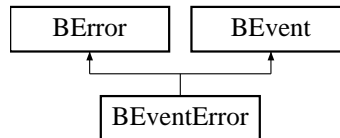
The documentation for this class was generated from the following files:

- [BEvent.h](#)
- [BEvent.cpp](#)

6.14 BEventError Class Reference

```
#include <BEvent.h>
```

Inheritance diagram for BEventError::



Public Member Functions

- [BEventError](#) (int errNo=NONE, [BString](#) errStr="")
- [BError](#) [getBinary](#) (void *data, uint32_t &size)
- [BError](#) [setBinary](#) (void *data, uint32_t &size)

6.14.1 Constructor & Destructor Documentation

6.14.1.1 [BEventError::BEventError](#) (int *errNo* = NONE, [BString](#) *errStr* = "")

6.14.2 Member Function Documentation

6.14.2.1 [BError](#) [BEventError::getBinary](#) (void **data*, uint32_t &*size*) [virtual]

Reimplemented from [BEvent](#).

6.14.2.2 [BError](#) [BEventError::setBinary](#) (void **data*, uint32_t &*size*) [virtual]

Reimplemented from [BEvent](#).

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

- [BEvent.h](#)
- [BEvent.cpp](#)

6.15 BEventInt Class Reference

This class provides an interface for sending simple integer events via a file descriptor. This allows threads to send events that can be picked up by the poll system call.

```
#include <BEvent.h>
```

Public Member Functions

- [BEventInt \(\)](#)
- [~BEventInt \(\)](#)
- [BError sendEvent](#) (int event)
Send an event.
- [BError getEvent](#) (int &event, int timeOutUs=-1)
Receive the event.
- [int getFd](#) ()

Private Attributes

- [int ofds](#) [2]
File descriptors for pipe.

6.15.1 Detailed Description

This class provides an interface for sending simple integer events via a file descriptor. This allows threads to send events that can be picked up by the poll system call.

6.15.2 Constructor & Destructor Documentation

6.15.2.1 BEventInt::BEventInt ()

6.15.2.2 BEventInt::~~BEventInt ()

6.15.3 Member Function Documentation

6.15.3.1 BError BEventInt::sendEvent (int event)

Send an event.

6.15.3.2 BError BEventInt::getEvent (int & event, int timeOutUs = -1)

Receive the event.

6.15.3.3 int BEventInt::getFd ()

6.15.4 Member Data Documentation

6.15.4.1 int BEventInt::ofds[2] [private]

File descriptors for pipe.

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

- [BEvent.h](#)
- [BEvent.cpp](#)

6.16 BEventPipe Class Reference

This class provides a base interface for sending events via a pipe. This allows threads to send events that can be picked up by the poll system call.

```
#include <BEvent.h>
```

Public Member Functions

- [BEventPipe \(\)](#)
- [~BEventPipe \(\)](#)
- [BError sendEvent \(BEvent *event\)](#)
Send an event.
- [BError getEvent \(BEvent *event, int timeOutUs=-1\)](#)
Receive the event.
- [int getReceiveFd \(\)](#)
returns the receive file descriptor for the poll system call

Private Attributes

- [int ofds \[2\]](#)
File descriptors for pipe.

6.16.1 Detailed Description

This class provides a base interface for sending events via a pipe. This allows threads to send events that can be picked up by the poll system call.

6.16.2 Constructor & Destructor Documentation

6.16.2.1 BEventPipe::BEventPipe ()

6.16.2.2 BEventPipe::~~BEventPipe ()

6.16.3 Member Function Documentation

6.16.3.1 BError BEventPipe::sendEvent (BEvent * event)

Send an event.

6.16.3.2 BError BEventPipe::getEvent (BEvent * event, int timeOutUs = -1)

Receive the event.

6.16.3.3 int BEventPipe::getReceiveFd ()

returns the receive file descriptor for the poll system call

6.16.4 Member Data Documentation

6.16.4.1 int BEventPipe::ofds[2] [private]

File descriptors for pipe.

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

- [BEvent.h](#)
- [BEvent.cpp](#)

6.17 BFile Class Reference

File operations class.

```
#include <BFile.h>
```

Public Member Functions

- [BFile](#) ()
Create opened specified file.
- [BFile](#) ([BString](#) name, [BString](#) mode)
Create opened specified file.
- [BFile](#) (const [BFile](#) &file)
Create opened specified file.
- [~BFile](#) ()
- [BError open](#) ([BString](#) name, [BString](#) mode)
Open file.
- [BError open](#) (FILE *file)
Assign object to opened file handle.
- [BError close](#) ()
Close file.
- [BError error](#) ()
Returns current error state.
- FILE * [getFd](#) ()
File descriptor.
- int [length](#) ()
File size in bytes.
- int [setVBuf](#) (char *buf, int mode, size_t size)
Set stream buffering options.
- int [read](#) (void *buf, int nbytes)
Read from file.
- int [readString](#) ([BString](#) &str)
Read string. (ref fgets).
- int [write](#) (const void *buf, int nbytes)
Write to file.
- int [writeString](#) (const [BString](#) &str)
Write string to file.
- int [seek](#) (int pos, int whence)

Set seek position.

- int `printf` (const char *fmt,...)
Formatted print into the file.
- `BFile` & `operator=` (const `BFile` &file)

Private Attributes

- FILE * `ofile`
- BString `ofilename`
- BString `omode`
- BError `oerror`

6.17.1 Detailed Description

File operations class.

6.17.2 Constructor & Destructor Documentation

6.17.2.1 BFile::BFile ()

6.17.2.2 BFile::BFile (BString *name*, BString *mode*)

Create opened specified file.

6.17.2.3 BFile::BFile (const BFile & *file*)

Create opened specified file.

6.17.2.4 BFile::~~BFile ()

6.17.3 Member Function Documentation

6.17.3.1 BError BFile::open (BString *name*, BString *mode*)

Open file.

6.17.3.2 BError BFile::open (FILE * *file*)

Assign object to opened file handle.

6.17.3.3 BError BFile::close ()

Close file.

6.17.3.4 BError BFile::error ()

Returns current error state.

6.17.3.5 FILE * BFile::getFd ()

File descriptor.

6.17.3.6 int BFile::length ()

File size in bytes.

6.17.3.7 int BFile::setVBuf (char * *buf*, int *mode*, size_t *size*)

Set stream buffering options.

6.17.3.8 int BFile::read (void * *buf*, int *nbytes*)

Read from file.

6.17.3.9 int BFile::readString (BString & *str*)

Read string. (ref fgets).

6.17.3.10 int BFile::write (const void * *buf*, int *nbytes*)

Write to file.

6.17.3.11 int BFile::writeString (const BString & *str*)

Write string to file.

6.17.3.12 int BFile::seek (int *pos*, int *whence*)

Set seek position.

6.17.3.13 int BFile::printf (const char * *fmt*, ...)

Formatted print into the file.

6.17.3.14 BFile & BFile::operator= (const BFile & *file*)

6.17.4 Member Data Documentation

6.17.4.1 FILE* BFile::ofile [private]

6.17.4.2 BString BFile::ofileName [private]

6.17.4.3 BString BFile::omode [private]

6.17.4.4 BError BFile::oerror [private]

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

- [BFile.h](#)
- [BFile.cpp](#)

6.18 BIter Class Reference

Iterator for [BList](#).

```
#include <BList.h>
```

Public Member Functions

- [BIter](#) (void *i=0)
- [operator void *](#) ()
- [int operator==](#) (const [BIter](#) &i)

Private Attributes

- void * [oi](#)

6.18.1 Detailed Description

Iterator for [BList](#).

6.18.2 Constructor & Destructor Documentation

6.18.2.1 [BIter::BIter](#) (void * *i* = 0) [inline]

6.18.3 Member Function Documentation

6.18.3.1 [BIter::operator void *](#) () [inline]

6.18.3.2 [int BIter::operator==](#) (const [BIter](#) &*i*) [inline]

6.18.4 Member Data Documentation

6.18.4.1 void* [BIter::oi](#) [private]

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

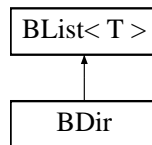
- [BList.h](#)

6.19 BList< T > Class Template Reference

Template based list class.

```
#include <BList.h>
```

Inheritance diagram for BList< T >::



Public Types

- typedef int(* [SortFunc](#))(T &a, T &b)
Prototype for sorting function.

Public Member Functions

- [BList](#) ()
- [BList](#) (const [BList](#)< T > &l)
- virtual [~BList](#) ()
- void [start](#) ([BIter](#) &i) const
Iterator to start of list.
- [BIter begin](#) () const
Iterator for start of list.
- [BIter end](#) () const
Iterator for end of list.
- [BIter end](#) ([BIter](#) &i) const
Iterator for end of list.
- void [next](#) ([BIter](#) &i) const
Iterator for next item in list.
- void [prev](#) ([BIter](#) &i)
Iterator for previous item in list.
- [BIter goTo](#) (int pos)
Iterator for pos item in list.
- int [position](#) ([BIter](#) i)
Postition in list item with iterator i.
- unsigned int [number](#) ()

Number of items in list.

- `int isEnd (BIter i) const`
True if iterator refers to last item.
- `T & front ()`
Get first item in list.
- `T & rear ()`
Get last item in list.
- `T & get (BIter i)`
Get item specified by iterator in list.
- `const T & get (BIter i) const`
Get item specified by iterator in list.
- `void append (const T &item)`
Append item to list.
- `virtual void insert (BIter &i, const T &item)`
Insert item before item.
- `void insertAfter (BIter &i, const T &item)`
Insert item after item.
- `virtual void clear ()`
Clear the list.
- `virtual void del (BIter &i)`
Delete specified item.
- `void deleteLast ()`
Delete last item.
- `void deleteFirst ()`
Delete first item.
- `void push (const T &i)`
Push item onto list.
- `T pop ()`
Pop item from list deleting item.
- `void queueAdd (const T &i)`
Add item to end of list.
- `T queueGet ()`
Get item from front of list deleting item.

- void `append` (const `BList< T >` &l)
Append list to list.
- void `swap` (`BIter` i1, `BIter` i2)
Swap two items in list.
- void `sort` ()
Sort list based on get(i) values.
- void `sort` (`SortFunc` func)
Sort list based on Sort func.
- `BList< T >` & `operator=` (const `BList< T >` &l)
- `T` & `operator[]` (int i)
- const `T` & `operator[]` (int i) const
- `T` & `operator[]` (`BIter` i)
- const `T` & `operator[]` (`BIter` i) const
- `BList< T >` `operator+` (const `BList< T >` &l) const

Protected Member Functions

- virtual `Node` * `nodeGet` (`BIter` i)
- virtual const `Node` * `nodeGet` (`BIter` i) const
- virtual `Node` * `nodeCreate` (const `T` &item)

Protected Attributes

- `Node` * `onodes`
- unsigned int `olength`

Private Member Functions

- virtual `Node` * `nodeCreate` ()

Classes

- class `Node`

6.19.1 Detailed Description

`template<class T> class BList< T >`

Template based list class.

6.19.2 Member Typedef Documentation

6.19.2.1 `template<class T> typedef int(* BList< T >::SortFunc)(T &a, T &b)`

Prototype for sorting function.

6.19.3 Constructor & Destructor Documentation

6.19.3.1 `template<class T> BList< T >::BList () [inline]`

6.19.3.2 `template<class T> BList< T >::BList (const BList< T > & l) [inline]`

6.19.3.3 `template<class T> BList< T >::~~BList () [inline, virtual]`

6.19.4 Member Function Documentation

6.19.4.1 `template<class T> void BList< T >::start (BIter & i) const [inline]`

Iterator to start of list.

6.19.4.2 `template<class T> BIter BList< T >::begin () const [inline]`

Iterator for start of list.

6.19.4.3 `template<class T> BIter BList< T >::end () const [inline]`

Iterator for end of list.

6.19.4.4 `template<class T> BIter BList< T >::end (BIter & i) const [inline]`

Iterator for end of list.

6.19.4.5 `template<class T> void BList< T >::next (BIter & i) const [inline]`

Iterator for next item in list.

6.19.4.6 `template<class T> void BList< T >::prev (BIter & i) [inline]`

Iterator for previous item in list.

6.19.4.7 `template<class T> BIter BList< T >::goTo (int pos) [inline]`

Iterator for pos item in list.

6.19.4.8 `template<class T> int BList< T >::position (BIter i) [inline]`

Postition in list item with iterator i.

6.19.4.9 `template<class T> unsigned int BList< T >::number () [inline]`

Number of items in list.

6.19.4.10 `template<class T> int BList< T >::isEnd (BIter i) const` `[inline]`

True if iterator refers to last item.

6.19.4.11 `template<class T> T & BList< T >::front ()` `[inline]`

Get first item in list.

6.19.4.12 `template<class T> T & BList< T >::rear ()` `[inline]`

Get last item in list.

6.19.4.13 `template<class T> T & BList< T >::get (BIter i)` `[inline]`

Get item specified by iterator in list.

6.19.4.14 `template<class T> const T & BList< T >::get (BIter i) const` `[inline]`

Get item specified by iterator in list.

6.19.4.15 `template<class T> void BList< T >::append (const T & item)` `[inline]`

Append item to list.

6.19.4.16 `template<class T> void BList< T >::insert (BIter & i, const T & item)` `[inline, virtual]`

Insert item before item.

Reimplemented in [BEntryList](#).

6.19.4.17 `template<class T> void BList< T >::insertAfter (BIter & i, const T & item)` `[inline]`

Insert item after item.

6.19.4.18 `template<class T> void BList< T >::clear ()` `[inline, virtual]`

Clear the list.

Reimplemented in [BDir](#), [BEntryList](#), and [BEntryFile](#).

6.19.4.19 `template<class T> void BList< T >::del (BIter & i)` `[inline, virtual]`

Delete specified item.

Reimplemented in [BEntryList](#).

6.19.4.20 `template<class T> void BList< T >::deleteLast () [inline]`

Delete last item.

6.19.4.21 `template<class T> void BList< T >::deleteFirst () [inline]`

Delete first item.

6.19.4.22 `template<class T> void BList< T >::push (const T & i) [inline]`

Push item onto list.

6.19.4.23 `template<class T> T BList< T >::pop () [inline]`

Pop item from list deleting item.

6.19.4.24 `template<class T> void BList< T >::queueAdd (const T & i) [inline]`

Add item to end of list.

6.19.4.25 `template<class T> T BList< T >::queueGet () [inline]`

Get item from front of list deleting item.

6.19.4.26 `template<class T> void BList< T >::append (const BList< T > & l) [inline]`

Append list to list.

6.19.4.27 `template<class T> void BList< T >::swap (BIter i1, BIter i2) [inline]`

Swap two items in list.

6.19.4.28 `template<class T> void BList< T >::sort () [inline]`

Sort list based on get(i) values.

6.19.4.29 `template<class T> void BList< T >::sort (SortFunc func) [inline]`

Sort list based on Sort func.

- 6.19.4.30** `template<class T> BList< T > & BList< T >::operator= (const BList< T > & l)`
[inline]
- 6.19.4.31** `template<class T> T & BList< T >::operator[] (int i)` [inline]
- 6.19.4.32** `template<class T> const T & BList< T >::operator[] (int i) const` [inline]
- 6.19.4.33** `template<class T> T & BList< T >::operator[] (BIter i)` [inline]
- 6.19.4.34** `template<class T> const T & BList< T >::operator[] (BIter i) const` [inline]
- 6.19.4.35** `template<class T> BList< T > BList< T >::operator+ (const BList< T > & l) const`
[inline]
- 6.19.4.36** `template<class T> BList< T >::Node * BList< T >::nodeGet (BIter i)` [inline,
protected, virtual]
- 6.19.4.37** `template<class T> const BList< T >::Node * BList< T >::nodeGet (BIter i) const`
[inline, protected, virtual]
- 6.19.4.38** `template<class T> BList< T >::Node * BList< T >::nodeCreate (const T & item)`
[inline, protected, virtual]
- 6.19.4.39** `template<class T> BList< T >::Node * BList< T >::nodeCreate ()` [inline,
private, virtual]

6.19.5 Member Data Documentation

- 6.19.5.1** `template<class T> Node* BList< T >::onodes` [protected]
- 6.19.5.2** `template<class T> unsigned int BList< T >::olength` [protected]

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

- [BList.h](#)
- [BList_func.h](#)

6.20 BList< T >::Node Class Reference

```
#include <BList.h>
```

Public Member Functions

- [Node](#) (const T &i)

Public Attributes

- [Node](#) * [next](#)
- [Node](#) * [prev](#)
- T [item](#)

```
template<class T> class BList< T >::Node
```

6.20.1 Constructor & Destructor Documentation

6.20.1.1 `template<class T> BList< T >::Node::Node (const T &i) [inline]`

6.20.2 Member Data Documentation

6.20.2.1 `template<class T> Node* BList< T >::Node::next`

6.20.2.2 `template<class T> Node* BList< T >::Node::prev`

6.20.2.3 `template<class T> T BList< T >::Node::item`

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

- [BList.h](#)

6.21 BMutex Class Reference

Mutex class.

```
#include <BMutex.h>
```

Public Member Functions

- [BMutex](#) ()
- [BMutex](#) (const [BMutex](#) &mutex)
- [~BMutex](#) ()
- int [lock](#) ()
Set lock, wait in necessary.
- int [unlock](#) ()
Unlock the lock.
- int [tryLock](#) ()
Test the lock.
- [BMutex](#) & [operator=](#) (const [BMutex](#) &mutex)

Private Attributes

- pthread_mutex_t [omutex](#)

6.21.1 Detailed Description

Mutex class.

6.21.2 Constructor & Destructor Documentation

6.21.2.1 BMutex::BMutex ()

6.21.2.2 BMutex::BMutex (const BMutex & mutex)

6.21.2.3 BMutex::~~BMutex ()

6.21.3 Member Function Documentation

6.21.3.1 int BMutex::lock ()

Set lock, wait in necessary.

6.21.3.2 int BMutex::unlock ()

Unlock the lock.

6.21.3.3 int BMutex::tryLock ()

Test the lock.

6.21.3.4 BMutex & BMutex::operator= (const BMutex & *mutex*)

6.21.4 Member Data Documentation

6.21.4.1 pthread_mutex_t BMutex::omutex [private]

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

- [BMutex.h](#)
- [BMutex.cpp](#)

6.22 BNameValue< T > Class Template Reference

```
#include <BNameValue.h>
```

Public Member Functions

- [BNameValue](#) ()
- [BNameValue](#) ([BString](#) name, const T &value)
- [BString](#) [getName](#) ()
- T & [getValue](#) ()

Private Attributes

- [BString](#) [oname](#)
- T [ovalue](#)

```
template<class T> class BNameValue< T >
```

6.22.1 Constructor & Destructor Documentation

6.22.1.1 `template<class T> BNameValue< T >::BNameValue ()` `[inline]`

6.22.1.2 `template<class T> BNameValue< T >::BNameValue (BString name, const T & value)`
`[inline]`

6.22.2 Member Function Documentation

6.22.2.1 `template<class T> BString BNameValue< T >::getName ()` `[inline]`

6.22.2.2 `template<class T> T& BNameValue< T >::getValue ()` `[inline]`

6.22.3 Member Data Documentation

6.22.3.1 `template<class T> BString BNameValue< T >::oname` `[private]`

6.22.3.2 `template<class T> T BNameValue< T >::ovalue` `[private]`

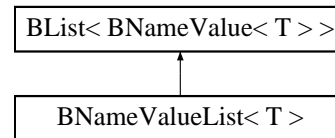
The documentation for this class was generated from the following file:

- [BNameValue.h](#)

6.23 BNameValueList< T > Class Template Reference

```
#include <BNameValue.h>
```

Inheritance diagram for BNameValueList< T >::



Public Member Functions

- T * [find](#) (BString name)

```
template<class T> class BNameValueList< T >
```

6.23.1 Member Function Documentation

6.23.1.1 `template<class T> T* BNameValueList< T >::find (BString name)` [inline]

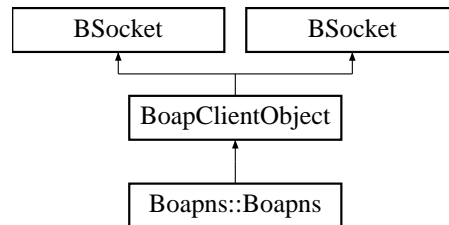
The documentation for this class was generated from the following file:

- [BNameValue.h](#)

6.24 BoapClientObject Class Reference

```
#include <BoapSimple.h>
```

Inheritance diagram for BoapClientObject::



Public Member Functions

- [BoapClientObject](#) ([BString](#) name="")
- [BError](#) [connectService](#) ([BString](#) name)
Connects to the named service.
- [BError](#) [disconnectService](#) ()
Disconnects from the named service.
- [BString](#) [getServiceName](#) ()
Get the name of the service.
- [BError](#) [ping](#) ([BUInt32](#) &apiVersion)
Pings the connection and finds the remotes version number.
- [BError](#) [setConnectionPriority](#) ([BoapPriority](#) priority)
Sets the connection priority.
- void [setMaxLength](#) ([BUInt32](#) maxLength)
Sets the maximum packet length.
- void [setTimeout](#) (int timeout)
Sets the timeout in micro seconds. -1 is wait indefinitely.
- [BoapClientObject](#) ([BString](#) name)
- [BError](#) [connectService](#) ([BString](#) name)

Protected Member Functions

- [BError](#) [pingLocked](#) ([BUInt32](#) &apiVersion)
- [BError](#) [checkApiVersion](#) ()
- [BError](#) [performCall](#) ([BoapPacket](#) &tx, [BoapPacket](#) &rx)
Performs a RPC call to the named service.
- [BError](#) [performSend](#) ([BoapPacket](#) &tx)

Performs a send to the named service.

- [BError performRecv](#) ([BoapPacket](#) &rx)

Performs a receive.

- [BError performSend](#) ([BoapPacket](#) &tx)
- [BError performRecv](#) ([BoapPacket](#) &rx)
- [BError performCall](#) ([BoapPacket](#) &tx, [BoapPacket](#) &rx)

Protected Attributes

- [BString](#) oname
- [BUInt32](#) oapiVersion
- [BoapPriority](#) opriority
- [BoapService](#) oservice
- [int](#) oconnected
- [BUInt32](#) omaxLength
- [BoapPacket](#) otx
- [BoapPacket](#) orx
- [BMutex](#) olock
- [int](#) otimeout
- [int](#) oreconnect

6.24.1 Constructor & Destructor Documentation

6.24.1.1 [BoapClientObject::BoapClientObject](#) ([BString](#) name = " ")

6.24.1.2 [BoapClientObject::BoapClientObject](#) ([BString](#) name)

6.24.2 Member Function Documentation

6.24.2.1 [BError BoapClientObject::connectService](#) ([BString](#) name)

Connects to the named service.

6.24.2.2 [BError BoapClientObject::disconnectService](#) ()

Disconnects from the named service.

6.24.2.3 [BString BoapClientObject::getServiceName](#) ()

Get the name of the service.

6.24.2.4 [BError BoapClientObject::ping](#) ([BUInt32](#) & apiVersion)

Pings the connection and finds the remotes version number.

6.24.2.5 BError BoapClientObject::setConnectionPriority (BoapPriority *priority*)

Sets the connection priority.

6.24.2.6 void BoapClientObject::setMaxLength (BUInt32 *maxLength*)

Sets the maximum packet length.

6.24.2.7 void BoapClientObject::setTimeout (int *timeout*)

Sets the timeout in micro seconds. -1 is wait indefinitely.

6.24.2.8 BError BoapClientObject::pingLocked (BUInt32 & *apiVersion*) [protected]**6.24.2.9 BError BoapClientObject::checkApiVersion ()** [protected]**6.24.2.10 BError BoapClientObject::performCall (BoapPacket & *tx*, BoapPacket & *rx*)**
[protected]

Performs a RPC call to the named service.

6.24.2.11 BError BoapClientObject::performSend (BoapPacket & *tx*) [protected]

Performs a send to the named service.

6.24.2.12 BError BoapClientObject::performRecv (BoapPacket & *rx*) [protected]

Performs a receive.

6.24.2.13 **BError** BoapClientObject::connectService (BString *name*)

6.24.2.14 **BError** BoapClientObject::performSend (BoapPacket & *tx*) [protected]

6.24.2.15 **BError** BoapClientObject::performRecv (BoapPacket & *rx*) [protected]

6.24.2.16 **BError** BoapClientObject::performCall (BoapPacket & *tx*, BoapPacket & *rx*)
[protected]

6.24.3 Member Data Documentation

6.24.3.1 **BString** BoapClientObject::oname [protected]

6.24.3.2 **BUInt32** BoapClientObject::oapiVersion [protected]

6.24.3.3 **BoapPriority** BoapClientObject::opriority [protected]

6.24.3.4 **BoapService** BoapClientObject::oservice [protected]

6.24.3.5 **int** BoapClientObject::oconnected [protected]

6.24.3.6 **BUInt32** BoapClientObject::omaxLength [protected]

6.24.3.7 **BoapPacket** BoapClientObject::otx [protected]

6.24.3.8 **BoapPacket** BoapClientObject::orx [protected]

6.24.3.9 **BMutex** BoapClientObject::olock [protected]

6.24.3.10 **int** BoapClientObject::otimeout [protected]

6.24.3.11 **int** BoapClientObject::oreconnect [protected]

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

- [Boap.h](#)
- [BoapSimple.h](#)
- [Boap.cpp](#)
- [BoapSimple.cc](#)

6.25 Boapns::BoapEntry Class Reference

```
#include <BoapnsD.h>
```

Public Member Functions

- [BoapEntry \(\)](#)
- [BoapEntry \(BString pname, BString phostName, BList< BString > paddressList, UInt32 pport, UInt32 pservice\)](#)

Public Attributes

- [BString name](#)
- [BString hostName](#)
- [BList< BString > addressList](#)
- [UInt32 port](#)
- [UInt32 service](#)

6.25.1 Constructor & Destructor Documentation

6.25.1.1 Boapns::BoapEntry::BoapEntry ()

6.25.1.2 Boapns::BoapEntry::BoapEntry (BString *pname*, BString *phostName*, BList< BString > *paddressList*, UInt32 *pport*, UInt32 *pservice*)

6.25.2 Member Data Documentation

6.25.2.1 BString Boapns::BoapEntry::name

6.25.2.2 BString Boapns::BoapEntry::hostName

6.25.2.3 BList<BString> Boapns::BoapEntry::addressList

6.25.2.4 UInt32 Boapns::BoapEntry::port

6.25.2.5 UInt32 Boapns::BoapEntry::service

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

- [BoapnsD.h](#)
- [BoapnsD.cc](#)

6.26 BoapFuncEntry Class Reference

```
#include <BoapSimple.h>
```

Public Member Functions

- [BoapFuncEntry](#) (int cmd, [BoapFunc](#) func)
- [BoapFuncEntry](#) (int cmd, [BoapFunc](#) func)

Public Attributes

- [UInt32](#) ocmd
- [BoapFunc](#) ofunc

6.26.1 Constructor & Destructor Documentation

6.26.1.1 [BoapFuncEntry::BoapFuncEntry](#) (int *cmd*, [BoapFunc](#) *func*)

6.26.1.2 [BoapFuncEntry::BoapFuncEntry](#) (int *cmd*, [BoapFunc](#) *func*)

6.26.2 Member Data Documentation

6.26.2.1 [UInt32](#) [BoapFuncEntry::ocmd](#)

6.26.2.2 [BoapFunc](#) [BoapFuncEntry::ofunc](#)

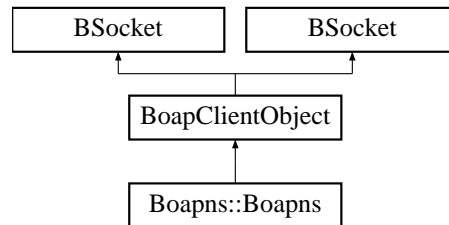
The documentation for this class was generated from the following files:

- [Boap.h](#)
- [BoapSimple.h](#)
- [Boap.cpp](#)
- [BoapSimple.cc](#)

6.27 Boapns::Boapns Class Reference

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

Inheritance diagram for Boapns::Boapns::



Public Member Functions

- [Boapns \(BString name=""\)](#)
- [BError getVersion \(BString &version\)](#)
- [BError getEntryList \(BList< BoapEntry > &entryList\)](#)
- [BError getEntry \(BString name, BoapEntry &entry\)](#)
- [BError addEntry \(BoapEntry entry\)](#)
- [BError delEntry \(BString name\)](#)
- [BError getNewName \(BString &name\)](#)

6.27.1 Constructor & Destructor Documentation

6.27.1.1 [Boapns::Boapns::Boapns \(BString *name* = " "\)](#)

6.27.2 Member Function Documentation

6.27.2.1 [BError Boapns::Boapns::getVersion \(BString & *version*\)](#)

6.27.2.2 [BError Boapns::Boapns::getEntryList \(BList< BoapEntry > & *entryList*\)](#)

6.27.2.3 [BError Boapns::Boapns::getEntry \(BString *name*, BoapEntry & *entry*\)](#)

6.27.2.4 [BError Boapns::Boapns::addEntry \(BoapEntry *entry*\)](#)

6.27.2.5 [BError Boapns::Boapns::delEntry \(BString *name*\)](#)

6.27.2.6 [BError Boapns::Boapns::getNewName \(BString & *name*\)](#)

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

- [BoapnsC.h](#)

6.28 BoapPacket Class Reference

```
#include <BoapSimple.h>
```

Public Member Functions

- [BoapPacket](#) ()
- [~BoapPacket](#) ()
- [int](#) [resize](#) (int size)
- [BError](#) [setData](#) (void *data, int nbytes)
- [int](#) [nbytes](#) ()
- [char *](#) [data](#) ()
- [int](#) [peekHead](#) ([BoapPacketHead](#) &head)
- [UInt32](#) [getCmd](#) ()
- [int](#) [pushHead](#) ([BoapPacketHead](#) &head)
- [int](#) [push](#) ([Int8](#) v)
- [int](#) [push](#) ([UInt8](#) v)
- [int](#) [push](#) ([Int16](#) v)
- [int](#) [push](#) ([UInt16](#) v)
- [int](#) [push](#) ([Int32](#) v)
- [int](#) [push](#) ([UInt32](#) v)
- [int](#) [push](#) ([Int64](#) v)
- [int](#) [push](#) ([UInt64](#) v)
- [int](#) [push](#) (const [BString](#) &v)
- [int](#) [push](#) ([Double](#) v)
- [int](#) [push](#) (const [BError](#) &v)
- [int](#) [push](#) ([UInt32](#) nBytes, const void *data, char *swapType="1")
- [int](#) [popHead](#) ([BoapPacketHead](#) &head)
- [int](#) [pop](#) ([Int8](#) &v)
- [int](#) [pop](#) ([UInt8](#) &v)
- [int](#) [pop](#) ([Int16](#) &v)
- [int](#) [pop](#) ([UInt16](#) &v)
- [int](#) [pop](#) ([Int32](#) &v)
- [int](#) [pop](#) ([UInt32](#) &v)
- [int](#) [pop](#) ([Int64](#) &v)
- [int](#) [pop](#) ([UInt64](#) &v)
- [int](#) [pop](#) ([BString](#) &v)
- [int](#) [pop](#) ([Double](#) &v)
- [int](#) [pop](#) ([BError](#) &v)
- [int](#) [pop](#) ([UInt32](#) nBytes, void *data, char *swapType="1")
- [BoapPacket](#) ()
- [~BoapPacket](#) ()
- [int](#) [resize](#) (int size)
- [BError](#) [setData](#) (void *data, int nbytes)
- [int](#) [nbytes](#) ()
- [char *](#) [data](#) ()
- [int](#) [pushHead](#) ([BoapPacketHead](#) &head)
- [int](#) [push](#) ([Int8](#) v)
- [int](#) [push](#) ([UInt8](#) v)

- int [push](#) ([Int16](#) v)
- int [push](#) ([UInt16](#) v)
- int [push](#) ([Int32](#) v)
- int [push](#) ([UInt32](#) v)
- int [push](#) ([BString](#) &v)
- int [push](#) ([Double](#) v)
- int [push](#) ([BError](#) &v)
- int [push](#) ([UInt32](#) nBytes, const void *data)
- int [popHead](#) ([BoapPacketHead](#) &head)
- int [pop](#) ([Int8](#) &v)
- int [pop](#) ([UInt8](#) &v)
- int [pop](#) ([Int16](#) &v)
- int [pop](#) ([UInt16](#) &v)
- int [pop](#) ([Int32](#) &v)
- int [pop](#) ([UInt32](#) &v)
- int [pop](#) ([BString](#) &v)
- int [pop](#) ([Double](#) &v)
- int [pop](#) ([BError](#) &v)
- int [pop](#) ([UInt32](#) nBytes, void *data)

Private Member Functions

- void [copyWithSwap](#) (void *dst, const void *src, [UInt32](#) nBytes, char *swapType)
- void [updateLen](#) ()
- void [updateLen](#) ()

Private Attributes

- int [osize](#)
- int [onbytes](#)
- char * [odata](#)
- int [opos](#)
- char * [odata](#)

6.28.1 Constructor & Destructor Documentation

6.28.1.1 `BoapPacket::BoapPacket ()`

6.28.1.2 `BoapPacket::~~BoapPacket ()`

6.28.1.3 `BoapPacket::BoapPacket ()`

6.28.1.4 `BoapPacket::~~BoapPacket ()`

6.28.2 Member Function Documentation

6.28.2.1 `int BoapPacket::resize (int size)`

6.28.2.2 `BError BoapPacket::setData (void * data, int nbytes)`

6.28.2.3 `int BoapPacket::nbytes ()`

6.28.2.4 `char * BoapPacket::data ()`

6.28.2.5 `int BoapPacket::peekHead (BoapPacketHead & head)`

6.28.2.6 `UInt32 BoapPacket::getCmd ()`

6.28.2.7 `int BoapPacket::pushHead (BoapPacketHead & head)`

6.28.2.8 `int BoapPacket::push (Int8 v)`

6.28.2.9 `int BoapPacket::push (UInt8 v)`

6.28.2.10 `int BoapPacket::push (Int16 v)`

6.28.2.11 `int BoapPacket::push (UInt16 v)`

6.28.2.12 `int BoapPacket::push (Int32 v)`

6.28.2.13 `int BoapPacket::push (UInt32 v)`

6.28.2.14 `int BoapPacket::push (Int64 v)`

6.28.2.15 `int BoapPacket::push (UInt64 v)`

6.28.2.16 `int BoapPacket::push (const BString & v)`

6.28.2.17 `int BoapPacket::push (Double v)`

6.28.2.18 `int BoapPacket::push (const BError & v)`

6.28.2.19 `int BoapPacket::push (UInt32 nBytes, const void * data, char * swapType = "1")`

6.28.2.20 `int BoapPacket::popHead (BoapPacketHead & head)`

6.28.2.21 `int BoapPacket::pop (Int8 & v)`

6.28.2.22 `int BoapPacket::pop (UInt8 & v)`

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6.28.2.23 `int BoapPacket::pop (Int16 & v)`

6.28.2.24 `int BoapPacket::pop (UInt16 & v)`

6.28.2.25 `int BoapPacket::pop (Int32 & v)`

- [Boap.h](#)
- [BoapSimple.h](#)
- [Boap.cpp](#)
- [BoapSimple.cc](#)

6.29 BoapPacketHead Struct Reference

```
#include <BoapSimple.h>
```

Public Attributes

- [UInt32 type](#)
- [UInt32 length](#)
- [UInt32 service](#)
- [UInt32 cmd](#)
- [BoapType type](#)
- [BoapService service](#)
- [UInt32 reserved](#) [12]

6.29.1 Member Data Documentation

6.29.1.1 [UInt32 BoapPacketHead::type](#)

6.29.1.2 [UInt32 BoapPacketHead::length](#)

6.29.1.3 [UInt32 BoapPacketHead::service](#)

6.29.1.4 [UInt32 BoapPacketHead::cmd](#)

6.29.1.5 [BoapType BoapPacketHead::type](#)

6.29.1.6 [BoapService BoapPacketHead::service](#)

6.29.1.7 [UInt32 BoapPacketHead::reserved\[12\]](#)

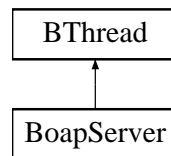
The documentation for this struct was generated from the following files:

- [Boap.h](#)
- [BoapSimple.h](#)

6.30 BoapServer Class Reference

```
#include <BoapSimple.h>
```

Inheritance diagram for BoapServer::



Public Types

- enum { **NOTHEADS** = 0, **THREADED** = 1 }

Public Member Functions

- **BoapServer** ()
- **~BoapServer** ()
- **BError** **init** (**BString** boapNsHost="", int threaded=0, int isBoapns=0)
- **BError** **run** (int inThread=0)
- **BError** **processEvent** (**BoapPacket** &rx)
- **BError** **addObject** (**BoapServiceObject** *object)
- **BError** **process** (**BoapServerConnection** *conn, **BoapPacket** &rx, **BoapPacket** &tx)
- **BError** **sendEvent** (**BoapPacket** &tx)
- **BSocket** & **getSocket** ()
- **BSocket** & **getEventSocket** ()
- **BError** **processEvent** (int fd)
- **BString** **getHostName** ()
- void **clientGone** (**BoapServerConnection** *client)
- int **getConnectionsNumber** ()
- **BoapServer** ()
- **BError** **init** (int boapNs=0)
- **BError** **run** ()
- **BError** **processEvent** (**BoapPacket** &rx)
- **BError** **addObject** (**BoapServiceObject** *object)
- **BError** **process** (int fd)
- **BError** **sendEvent** (**BoapPacket** &tx)
- **BSocket** & **getSocket** ()
- **BSocket** & **getEventSocket** ()
- **BError** **processEvent** (int fd)
- **BString** **getHostName** ()

Private Member Functions

- void * **function** ()

Private Attributes

- int `othreaded`
- int `oisBoapns`
- `Boapns::Boapns * oboapns`
- `BList< BoapServerConnection * > oclients`
- `BEventInt oclientGoneEvent`
- `BList< BoapServiceEntry > oservices`
- `BPoll opoll`
- `BSocket onet`
- `BSocket onetEvent`
- `BSocketAddressINET onetEventAddress`
- `BString ohostName`
- int `oboapNs`
- `BoapPacket orx`
- `BoapPacket otx`
- `BList< BoapServiceEntry > oservices`

6.30.1 Member Enumeration Documentation

6.30.1.1 anonymous enum

Enumerator:

NOTTHREADS

THREADED

6.30.2 Constructor & Destructor Documentation

6.30.2.1 **BoapServer::BoapServer ()**

6.30.2.2 **BoapServer::~~BoapServer ()**

6.30.2.3 **BoapServer::BoapServer ()**

6.30.3 Member Function Documentation

6.30.3.1 **BError BoapServer::init (BString *boapNsHost* = " ", int *threaded* = 0, int *isBoapns* = 0)**

6.30.3.2 **BError BoapServer::run (int *inThread* = 0)**

6.30.3.3 **BError BoapServer::processEvent (BoapPacket & *rx*)**

6.30.3.4 **BError BoapServer::addObject (BoapServiceObject * *object*)**

6.30.3.5 **BError BoapServer::process (BoapServerConnection * *conn*, BoapPacket & *rx*,
BoapPacket & *tx*)**

6.30.3.6 **BError BoapServer::sendEvent (BoapPacket & *tx*)**

6.30.3.7 **BSocket & BoapServer::getSocket ()**

6.30.3.8 **BSocket & BoapServer::getEventSocket ()**

6.30.3.9 **BError BoapServer::processEvent (int *fd*)**

6.30.3.10 **BString BoapServer::getHostName ()**

6.30.3.11 **void BoapServer::clientGone (BoapServerConnection * *client*)**

6.30.3.12 **int BoapServer::getConnectionsNumber ()**

6.30.3.13 **void * BoapServer::function ()** [private, virtual]

Reimplemented from [BThread](#).

- 6.30.3.14 BError BoapServer::init (int *boapNs* = 0)
- 6.30.3.15 BError BoapServer::run ()
- 6.30.3.16 BError BoapServer::processEvent (BoapPacket & *rx*)
- 6.30.3.17 BError BoapServer::addObject (BoapServiceObject * *object*)
- 6.30.3.18 BError BoapServer::process (int *fd*)
- 6.30.3.19 BError BoapServer::sendEvent (BoapPacket & *tx*)
- 6.30.3.20 BSocket& BoapServer::getSocket ()
- 6.30.3.21 BSocket& BoapServer::getEventSocket ()
- 6.30.3.22 BError BoapServer::processEvent (int *fd*)
- 6.30.3.23 BString BoapServer::getHostName ()

6.30.4 Member Data Documentation

- 6.30.4.1 int BoapServer::othreaded [private]
- 6.30.4.2 int BoapServer::oisBoapns [private]
- 6.30.4.3 Boapns::Boapns* BoapServer::oboapns [private]
- 6.30.4.4 BList<BoapServerConnection*> BoapServer::oclients [private]
- 6.30.4.5 BEventInt BoapServer::oclientGoneEvent [private]
- 6.30.4.6 BList<BoapServiceEntry> BoapServer::oservices [private]
- 6.30.4.7 BPoll BoapServer::opoll [private]
- 6.30.4.8 BSocket BoapServer::onet [private]
- 6.30.4.9 BSocket BoapServer::onetEvent [private]
- 6.30.4.10 BSocketAddressINET BoapServer::onetEventAddress [private]
- 6.30.4.11 BString BoapServer::ohostName [private]
- 6.30.4.12 int BoapServer::oboapNs [private]
- 6.30.4.13 BoapPacket BoapServer::orx [private]
- 6.30.4.14 BoapPacket BoapServer::otx [private]
- 6.30.4.15 BList<BoapServiceEntry> BoapServer::oservices [private]

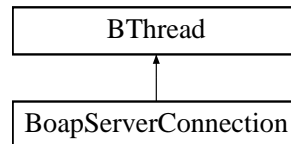
The documentation for this class was generated from the following files:

- [Boap.h](#)
- [BoapSimple.h](#)
- [Boap.cpp](#)
- [BoapSimple.cc](#)

6.31 BoapServerConnection Class Reference

```
#include <Boap.h>
```

Inheritance diagram for BoapServerConnection::



Public Member Functions

- [BoapServerConnection](#) ([BoapServer](#) &boapServer, int fd)
- [BError](#) process ()
- [BSocket](#) & [getSocket](#) ()
- void [setMaxLength](#) ([BUInt32](#) maxLength)

Private Member Functions

- void * [function](#) ()

Private Attributes

- [BoapServer](#) & oboapServer
- [BSocket](#) osocket
- [BoapPacket](#) orx
- [BoapPacket](#) otx
- [BUInt32](#) omaxLength

6.31.1 Constructor & Destructor Documentation

6.31.1.1 [BoapServerConnection::BoapServerConnection](#) ([BoapServer](#) & *boapServer*, int *fd*)

6.31.2 Member Function Documentation

6.31.2.1 [BError](#) [BoapServerConnection::process](#) ()

6.31.2.2 [BSocket](#) & [BoapServerConnection::getSocket](#) ()

6.31.2.3 void [BoapServerConnection::setMaxLength](#) ([BUInt32](#) *maxLength*)

6.31.2.4 void * [BoapServerConnection::function](#) () [private, virtual]

Reimplemented from [BThread](#).

6.31.3 Member Data Documentation

6.31.3.1 `BoapServer& BoapServerConnection::oboapServer` [private]

6.31.3.2 `BSocket BoapServerConnection::osocket` [private]

6.31.3.3 `BoapPacket BoapServerConnection::orx` [private]

6.31.3.4 `BoapPacket BoapServerConnection::otx` [private]

6.31.3.5 `BUInt32 BoapServerConnection::omaxLength` [private]

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

- [Boap.h](#)
- [Boap.cpp](#)

6.32 BoapServiceEntry Class Reference

```
#include <BoapSimple.h>
```

Public Member Functions

- [BoapServiceEntry](#) ([BoapService](#) service=0, [BoapServiceObject](#) *object=0)
- [BoapServiceEntry](#) ([BoapService](#) service=0, [BoapServiceObject](#) *object=0)

Public Attributes

- [BoapService](#) oservice
- [BoapServiceObject](#) * oobject
- [BoapServiceObject](#) * oobject

6.32.1 Constructor & Destructor Documentation

6.32.1.1 [BoapServiceEntry::BoapServiceEntry](#) ([BoapService](#) *service* = 0, [BoapServiceObject](#) * *object* = 0) [inline]

6.32.1.2 [BoapServiceEntry::BoapServiceEntry](#) ([BoapService](#) *service* = 0, [BoapServiceObject](#) * *object* = 0) [inline]

6.32.2 Member Data Documentation

6.32.2.1 [BoapService](#) [BoapServiceEntry::oservice](#)

6.32.2.2 [BoapServiceObject](#)* [BoapServiceEntry::oobject](#)

6.32.2.3 [BoapServiceObject](#)* [BoapServiceEntry::oobject](#)

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

- [Boap.h](#)
- [BoapSimple.h](#)

6.33 BoapServiceObject Class Reference

```
#include <BoapSimple.h>
```

Public Member Functions

- [BoapServiceObject](#) ([BoapServer](#) &server, [BString](#) name="")
- virtual [~BoapServiceObject](#) ()
- [BError](#) setName ([BString](#) name)
- [BError](#) sendEvent ([BString](#) signalName, [Int32](#) arg)
- virtual [BError](#) processEvent ([BString](#) objectName, [BString](#) name, [Int32](#) arg)
- [BString](#) name ()
- [BError](#) doPing ([BoapServerConnection](#) *conn, [BoapPacket](#) &rx, [BoapPacket](#) &tx)
- [BError](#) doConnectionPriority ([BoapServerConnection](#) *conn, [BoapPacket](#) &rx, [BoapPacket](#) &tx)
- [BError](#) process ([BoapServerConnection](#) *conn, [BoapPacket](#) &rx, [BoapPacket](#) &tx)
- virtual [BError](#) processEvent ([BoapPacket](#) &rx)
- [BoapServiceObject](#) ([BoapServer](#) &server, [BString](#) name)
- virtual [~BoapServiceObject](#) ()
- [BError](#) sendEvent ([BString](#) signalName, [Int32](#) arg)
- virtual [BError](#) processEvent ([BString](#) objectName, [BString](#) name, [Int32](#) arg)
- [BString](#) name ()
- [BError](#) process ([BoapPacket](#) &rx, [BoapPacket](#) &tx)
- virtual [BError](#) processEvent ([BoapPacket](#) &rx)

Protected Member Functions

- [BError](#) sendEvent ([BoapPacket](#) &tx)
- [BError](#) sendEvent ([BoapPacket](#) &tx)

Protected Attributes

- [BoapServer](#) & oserver
- [BString](#) oname
- [BUInt32](#) oapiVersion
- [BList](#)< [BoapFuncEntry](#) > ofuncList
- [BoapServer](#) & oserver
- [BList](#)< [BoapFuncEntry](#) > ofuncList

6.33.1 Constructor & Destructor Documentation

6.33.1.1 BoapServiceObject::BoapServiceObject (BoapServer & *server*, BString *name* = "")

6.33.1.2 BoapServiceObject::~~BoapServiceObject () [virtual]

6.33.1.3 BoapServiceObject::BoapServiceObject (BoapServer & *server*, BString *name*)

6.33.1.4 virtual BoapServiceObject::~~BoapServiceObject () [virtual]

6.33.2 Member Function Documentation

6.33.2.1 BError BoapServiceObject::setName (BString *name*)

6.33.2.2 BError BoapServiceObject::sendEvent (BString *signalName*, Int32 *arg*)

6.33.2.3 BError BoapServiceObject::processEvent (BString *objectName*, BString *name*, Int32 *arg*)
[virtual]

6.33.2.4 BString BoapServiceObject::name ()

6.33.2.5 BError BoapServiceObject::doPing (BoapServerConnection * *conn*, BoapPacket & *rx*,
BoapPacket & *tx*)

6.33.2.6 BError BoapServiceObject::doConnectionPriority (BoapServerConnection * *conn*,
BoapPacket & *rx*, BoapPacket & *tx*)

6.33.2.7 BError BoapServiceObject::process (BoapServerConnection * *conn*, BoapPacket & *rx*,
BoapPacket & *tx*)

6.33.2.8 BError BoapServiceObject::processEvent (BoapPacket & *rx*) [virtual]

6.33.2.9 BError BoapServiceObject::sendEvent (BoapPacket & *tx*) [protected]

6.33.2.10 BError BoapServiceObject::sendEvent (BString *signalName*, Int32 *arg*)

6.33.2.11 virtual BError BoapServiceObject::processEvent (BString *objectName*, BString *name*,
Int32 *arg*) [virtual]

6.33.2.12 BString BoapServiceObject::name ()

6.33.2.13 BError BoapServiceObject::process (BoapPacket & *rx*, BoapPacket & *tx*)

6.33.2.14 virtual BError BoapServiceObject::processEvent (BoapPacket & *rx*) [virtual]

6.33.2.15 BError BoapServiceObject::sendEvent (BoapPacket & *tx*) [protected]

6.33.3 Member Data Documentation

6.33.3.1 BoapServer& BoapServiceObject::oserver [protected]

6.33.3.2 BString BoapServiceObject::oname [protected]

6.33.3.3 BUInt32 BoapServiceObject::oapiVersion [protected]

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6.33.3.4 BList<BoapFuncEntry> BoapServiceObject::ofuncList [protected]

6.33.3.5 BoapServer& BoapServiceObject::oserver [protected]

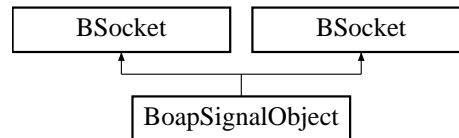
6.33.3.6 BList<BoapFuncEntry> BoapServiceObject::ofuncList [protected]

- [Boap.h](#)
- [BoapSimple.h](#)
- [Boap.cpp](#)
- [BoapSimple.cc](#)

6.34 BoapSignalObject Class Reference

```
#include <BoapSimple.h>
```

Inheritance diagram for BoapSignalObject::



Public Member Functions

- [BoapSignalObject \(\)](#)
- [BoapSignalObject \(\)](#)

Protected Member Functions

- [BError performSend \(BoapPacket &tx\)](#)
- [BError performSend \(BoapPacket &tx\)](#)

Protected Attributes

- [BoapPacket otx](#)
- [BoapPacket orx](#)

6.34.1 Constructor & Destructor Documentation

6.34.1.1 [BoapSignalObject::BoapSignalObject \(\)](#)

6.34.1.2 [BoapSignalObject::BoapSignalObject \(\)](#)

6.34.2 Member Function Documentation

6.34.2.1 [BError BoapSignalObject::performSend \(BoapPacket & tx\)](#) [protected]

6.34.2.2 [BError BoapSignalObject::performSend \(BoapPacket & tx\)](#) [protected]

6.34.3 Member Data Documentation

6.34.3.1 [BoapPacket BoapSignalObject::otx](#) [protected]

6.34.3.2 [BoapPacket BoapSignalObject::orx](#) [protected]

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

- [Boap.h](#)
- [BoapSimple.h](#)

- [Boap.cpp](#)
- [BoapSimple.cc](#)

6.35 BObject Class Reference

```
#include <BObject.h>
```

Public Member Functions

- [BObject](#) ()
- virtual [~BObject](#) ()
- virtual [BError](#) [getBinary](#) (BDataBuf &buf)
- virtual [BError](#) [setBinary](#) (BDataBuf &buf)
- virtual [BString](#) [getString](#) ()
- virtual [BError](#) [setString](#) ([BString](#) str)
- virtual [BMemberList](#) [getMemberList](#) ()
- virtual [BError](#) [addMember](#) ([BString](#) name, [BObject](#) *object)
- virtual void [printIt](#) ()
- virtual BType & [getType](#) ()

Static Public Member Functions

- static [BObject](#) * [createObj](#) ()

Static Public Attributes

- static BType [otype](#) = btypesList.appendType(BType("BObject", BTypeDomainBase, BTypeObject, createObj))

6.35.1 Constructor & Destructor Documentation

6.35.1.1 **BObject::BObject ()**

6.35.1.2 **BObject::~~BObject ()** [virtual]

6.35.2 Member Function Documentation

6.35.2.1 **BError BObject::getBinary (BDataBuf & *buf*)** [virtual]

6.35.2.2 **BError BObject::setBinary (BDataBuf & *buf*)** [virtual]

6.35.2.3 **BString BObject::getString ()** [virtual]

6.35.2.4 **BError BObject::setString (BString *str*)** [virtual]

6.35.2.5 **BMemberList BObject::getMemberList ()** [virtual]

6.35.2.6 **BError BObject::addMember (BString *name*, BObject * *object*)** [virtual]

6.35.2.7 **void BObject::printIt ()** [virtual]

6.35.2.8 **BType & BObject::getType ()** [virtual]

6.35.2.9 **BObject * BObject::createObj ()** [static]

6.35.3 Member Data Documentation

6.35.3.1 **BType BObject::otype = btypesList.appendType(BType("BObject", BTypeDomainBase, BTypeObject, createObj))** [static]

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

- [BObject.h](#)
- [BObject.cc](#)

6.36 BPoll Class Reference

This class provides an interface for polling a number of file descriptors. It uses round robin polling.

```
#include <BPoll.h>
```

Public Types

- typedef struct pollfd [PollFd](#)

Public Member Functions

- [BPoll](#) ()
- [~BPoll](#) ()
- void [append](#) (int fd, int events=POLLIN|POLLERR|POLLHUP|POLLNVAL)
Append a file descriptor to polling list.
- void [delFd](#) (int fd)
Remove a file descriptor from polling list.
- [BError doPoll](#) (int &fd, int timeoutUs=-1)
Perform polling operation.
- int [getPollFdsNum](#) ()
- [PollFd *](#) [getPollFds](#) ()
- void [clear](#) ()

Private Member Functions

- int [nextFd](#) (int i)

Private Attributes

- int [ofdsNum](#)
The number of FD's in list.
- [PollFd *](#) [ofds](#)
The list of poll fd's.
- int [ofdsNext](#)
The next list entry for round robin polling.

6.36.1 Detailed Description

This class provides an interface for polling a number of file descriptors. It uses round robin polling.

6.36.2 Member Typedef Documentation

6.36.2.1 `typedef struct pollfd BPoll::PollFd` `[read]`

6.36.3 Constructor & Destructor Documentation

6.36.3.1 `BPoll::BPoll ()`

6.36.3.2 `BPoll::~~BPoll ()`

6.36.4 Member Function Documentation

6.36.4.1 `void BPoll::append (int fd, int events = POLLIN|POLLERR|POLLHUP|POLLNVAL)`

Append a file descriptor to polling list.

6.36.4.2 `void BPoll::delFd (int fd)`

Remove a file descriptor from polling list.

6.36.4.3 `BError BPoll::doPoll (int &fd, int timeoutUs = -1)`

Perform polling operation.

6.36.4.4 `int BPoll::getPollFdsNum ()`

6.36.4.5 `BPoll::PollFd * BPoll::getPollFds ()`

6.36.4.6 `void BPoll::clear ()`

6.36.4.7 `int BPoll::nextFd (int i)` `[private]`

6.36.5 Member Data Documentation

6.36.5.1 `int BPoll::ofdsNum` `[private]`

The number of FD's in list.

6.36.5.2 `PollFd* BPoll::ofds` `[private]`

The list of poll fd's.

6.36.5.3 `int BPoll::ofdsNext` `[private]`

The next list entry for round robin polling.

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

- [BPoll.h](#)

- [BPoll-1.cpp](#)
- [BPoll.cpp](#)

6.37 BRefData Class Reference

Referenced data storage.

```
#include <BRefData.h>
```

Public Member Functions

- [BRefData](#) ()
- [BRefData](#) (int len)
- [BRefData](#) (const [BRefData](#) &refData)
- [~BRefData](#) ()
- [BRefData](#) * [copy](#) ()
- [BRefData](#) * [addRef](#) ()
- int [deleteRef](#) ()
- int [refCount](#) ()
- char * [data](#) ()
- int [len](#) ()
- void [setLen](#) (int len)
- [BRefData](#) & [operator=](#) ([BRefData](#) &refData)

Private Attributes

- void * [oData](#)
- int [oLen](#)
- int [oSize](#)
- int [oRefCount](#)

6.37.1 Detailed Description

Referenced data storage.

6.37.2 Constructor & Destructor Documentation

6.37.2.1 `BRefData::BRefData ()`

6.37.2.2 `BRefData::BRefData (int len)`

6.37.2.3 `BRefData::BRefData (const BRefData & refData)`

6.37.2.4 `BRefData::~~BRefData ()`

6.37.3 Member Function Documentation

6.37.3.1 `BRefData * BRefData::copy ()`

6.37.3.2 `BRefData * BRefData::addRef ()`

6.37.3.3 `int BRefData::deleteRef ()`

6.37.3.4 `int BRefData::refCount ()` `[inline]`

6.37.3.5 `char* BRefData::data ()` `[inline]`

6.37.3.6 `int BRefData::len ()` `[inline]`

6.37.3.7 `void BRefData::setLen (int len)`

6.37.3.8 `BRefData & BRefData::operator= (BRefData & refData)`

6.37.4 Member Data Documentation

6.37.4.1 `void* BRefData::oData` `[private]`

6.37.4.2 `int BRefData::oLen` `[private]`

6.37.4.3 `int BRefData::oSize` `[private]`

6.37.4.4 `int BRefData::oRefCount` `[private]`

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

- [BRefData.h](#)
- [BRefData.cpp](#)

6.38 BRtc Class Reference

Realtime clock.

```
#include <BRtc.h>
```

Public Member Functions

- [BRtc](#) ()
- [~BRtc](#) ()
- [BError init](#) (int rate)
Setup interrupt rate.
- void [wait](#) (int delayUs)
Wait specified uS.

Private Attributes

- int [ofd](#)
- int [orate](#)

6.38.1 Detailed Description

Realtime clock.

6.38.2 Constructor & Destructor Documentation

6.38.2.1 BRtc::BRtc ()

6.38.2.2 BRtc::~~BRtc ()

6.38.3 Member Function Documentation

6.38.3.1 BError BRtc::init (int *rate*)

Setup interrupt rate.

6.38.3.2 void BRtc::wait (int *delayUs*)

Wait specified uS.

6.38.4 Member Data Documentation

6.38.4.1 int BRtc::ofd [private]

6.38.4.2 int BRtc::orate [private]

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

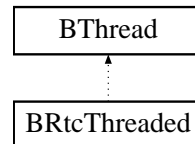
- [BRtc.h](#)
- [BRtc.cpp](#)

6.39 BRtcThreaded Class Reference

Threaded real time clock.

```
#include <BRtc.h>
```

Inheritance diagram for BRtcThreaded::



Public Member Functions

- [BRtcThreaded \(\)](#)
- [~BRtcThreaded \(\)](#)
- [BError init \(int rate\)](#)
Setup interrupt rate.
- void [wait \(int delayUs\)](#)
Wait specified uS.

Private Member Functions

- void * [function \(\)](#)

Private Attributes

- [BRtc orte](#)
- int [orate](#)
- [BCond ocond](#)

6.39.1 Detailed Description

Threaded real time clock.

6.39.2 Constructor & Destructor Documentation

6.39.2.1 BRtcThreaded::BRtcThreaded ()

6.39.2.2 BRtcThreaded::~~BRtcThreaded ()

6.39.3 Member Function Documentation

6.39.3.1 BError BRtcThreaded::init (int rate)

Setup interrupt rate.

6.39.3.2 void BRtcThreaded::wait (int *delayUs*)

Wait specified uS.

6.39.3.3 void * BRtcThreaded::function () [private, virtual]

Reimplemented from [BThread](#).

6.39.4 Member Data Documentation**6.39.4.1 BRtc BRtcThreaded::ortc [private]****6.39.4.2 int BRtcThreaded::orate [private]****6.39.4.3 BCond BRtcThreaded::ocond [private]**

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

- [BRtc.h](#)
- [BRtc.cpp](#)

6.40 BRWLock Class Reference

thread read-write locks

```
#include <BRWLock.h>
```

Public Member Functions

- [BRWLock \(\)](#)
- [BRWLock \(const BRWLock &rwlock\)](#)
- [~BRWLock \(\)](#)
- [int rdLock \(\)](#)
Set lock, wait if necessary.
- [int tryRdLock \(\)](#)
Test the lock.
- [int wrLock \(\)](#)
Set lock, wait if necessary.
- [int tryWrLock \(\)](#)
Test the lock.
- [int unlock \(\)](#)
Unlock the lock.
- [BRWLock & operator= \(const BRWLock &rwlock\)](#)

Private Attributes

- `pthread_rwlock_t` [olock](#)

6.40.1 Detailed Description

thread read-write locks

6.40.2 Constructor & Destructor Documentation

6.40.2.1 BRWLock::BRWLock ()

6.40.2.2 BRWLock::BRWLock (const BRWLock & rwlock)

6.40.2.3 BRWLock::~~BRWLock ()

6.40.3 Member Function Documentation

6.40.3.1 int BRWLock::rdLock ()

Set lock, wait if necessary.

6.40.3.2 int BRWLock::tryRdLock ()

Test the lock.

6.40.3.3 int BRWLock::wrLock ()

Set lock, wait if necessary.

6.40.3.4 int BRWLock::tryWrLock ()

Test the lock.

6.40.3.5 int BRWLock::unlock ()

Unlock the lock.

6.40.3.6 BRWLock & BRWLock::operator= (const BRWLock & *rwlock*)**6.40.4 Member Data Documentation****6.40.4.1 pthread_rwlock_t BRWLock::olock** [private]

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

- [BRWLock.h](#)
- [BRWLock.cpp](#)

6.41 BSema Class Reference

Sempahore class.

```
#include <BSema.h>
```

Public Member Functions

- [BSema](#) (int value=0)
- [BSema](#) (const [BSema](#) &sema)
- [~BSema](#) ()
- int [post](#) ()
Post condition.
- int [wait](#) ()
Wait for contition.
- int [timedWait](#) (int timeUs)
Wait for condition with timeout.
- int [tryWait](#) ()
Test for the condition.
- int [getValue](#) () const
- [BSema](#) & [operator=](#) (const [BSema](#) &sema)

Private Attributes

- sem_t [osema](#)

6.41.1 Detailed Description

Sempahore class.

6.41.2 Constructor & Destructor Documentation

6.41.2.1 [BSema::BSema](#) (int *value* = 0)

6.41.2.2 [BSema::BSema](#) (const [BSema](#) & *sema*)

6.41.2.3 [BSema::~BSema](#) ()

6.41.3 Member Function Documentation

6.41.3.1 int [BSema::post](#) ()

Post condition.

6.41.3.2 int BSema::wait ()

Wait for contition.

6.41.3.3 int BSema::timedWait (int *timeUs*)

Wait for condition with timeout.

6.41.3.4 int BSema::tryWait ()

Test for the condition.

6.41.3.5 int BSema::getValue () const**6.41.3.6 BSema & BSema::operator= (const BSema & *sema*)****6.41.4 Member Data Documentation****6.41.4.1 sem_t BSema::osema [private]**

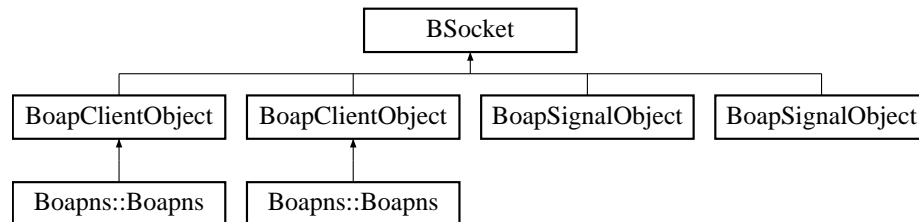
The documentation for this class was generated from the following files:

- [BSema.h](#)
- [BSema.cpp](#)

6.42 BSocket Class Reference

```
#include <BSocket.h>
```

Inheritance diagram for BSocket::



Public Types

- enum [NType](#) { [STREAM](#), [DGRAM](#) }
- enum [Priority](#) { [PriorityLow](#), [PriorityNormal](#), [PriorityHigh](#) }

Public Member Functions

- [BSocket](#) ()
- [BSocket](#) (int fd)
- [BSocket](#) (NType type)
- [~BSocket](#) ()
- [BError](#) init (NType type)
- int [getFd](#) ()
- [BError](#) bind (const [BSocketAddress](#) &add)
- [BError](#) connect (const [BSocketAddress](#) &add)
- [BError](#) shutdown (int how)
- [BError](#) close ()
- [BError](#) listen (int backlog=5)
- [BError](#) accept (int &fd)
- [BError](#) accept (int &fd, [BSocketAddress](#) &address)
- [BError](#) send (const void *buf, BSize nbytes, BSize &nbytesSent, int flags=0)
- [BError](#) sendTo (const [BSocketAddress](#) &address, const void *buf, BSize nbytes, BSize &nbytesSent, int flags=0)
- [BError](#) recv (void *buf, BSize maxbytes, BSize &nbytesRecv, int flags=0)
- [BError](#) recvFrom ([BSocketAddress](#) &address, void *buf, BSize maxbytes, BSize &nbytesRecv, int flags=0)
- [BError](#) recvWithTimeout (void *buf, BSize maxbytes, BSize &nbytesRecv, int timeout, int flags=0)
- [BError](#) recvFromWithTimeout ([BSocketAddress](#) &address, void *buf, BSize maxbytes, BSize &nbytesRecv, int timeout, int flags=0)
- [BError](#) setSockOpt (int level, int optname, void *optval, unsigned int optlen)
- [BError](#) getSockOpt (int level, int optname, void *optval, unsigned int *optlen)
- [BError](#) setReuseAddress (int on)
- [BError](#) setBroadCast (int on)
- [BError](#) setPriority (Priority priority)
- [BError](#) getMTU (uint32_t &mtu)
- [BError](#) getAddress ([BSocketAddress](#) &address)

Private Attributes

- int `osocket`

6.42.1 Member Enumeration Documentation

6.42.1.1 enum BSocket::NType

Enumerator:

STREAM

DGRAM

6.42.1.2 enum BSocket::Priority

Enumerator:

PriorityLow

PriorityNormal

PriorityHigh

6.42.2 Constructor & Destructor Documentation

6.42.2.1 BSocket::BSocket ()

6.42.2.2 BSocket::BSocket (int *fd*)

6.42.2.3 BSocket::BSocket (NType *type*)

6.42.2.4 BSocket::~~BSocket ()

6.42.3 Member Function Documentation

6.42.3.1 BError BSocket::init (NType *type*)

6.42.3.2 int BSocket::getFd ()

6.42.3.3 BError BSocket::bind (const BSocketAddress & *add*)

6.42.3.4 BError BSocket::connect (const BSocketAddress & *add*)

6.42.3.5 BError BSocket::shutdown (int *how*)

6.42.3.6 BError BSocket::close ()

6.42.3.7 BError BSocket::listen (int *backlog* = 5)

6.42.3.8 BError BSocket::accept (int & *fd*)

6.42.3.9 BError BSocket::accept (int & *fd*, BSocketAddress & *address*)

6.42.3.10 BError BSocket::send (const void * *buf*, BSize *nbytes*, BSize & *nbytesSent*, int *flags* = 0)

6.42.3.11 BError BSocket::sendTo (const BSocketAddress & *address*, const void * *buf*, BSize *nbytes*, BSize & *nbytesSent*, int *flags* = 0)

6.42.3.12 BError BSocket::recv (void * *buf*, BSize *maxbytes*, BSize & *nbytesRecv*, int *flags* = 0)

6.42.3.13 BError BSocket::recvFrom (BSocketAddress & *address*, void * *buf*, BSize *maxbytes*, BSize & *nbytesRecv*, int *flags* = 0)

6.42.3.14 BError BSocket::recvWithTimeout (void * *buf*, BSize *maxbytes*, BSize & *nbytesRecv*, int *timeout*, int *flags* = 0)

6.42.3.15 BError BSocket::recvFromWithTimeout (BSocketAddress & *address*, void * *buf*, BSize *maxbytes*, BSize & *nbytesRecv*, int *timeout*, int *flags* = 0)

6.42.3.16 BError BSocket::setSockOpt (int *level*, int *optname*, void * *optval*, unsigned int *optlen*)

6.42.3.17 BError BSocket::getSockOpt (int *level*, int *optname*, void * *optval*, unsigned int * *optlen*)

6.42.3.18 BError BSocket::setReuseAddress (int *on*)

6.42.3.19 BError BSocket::setBroadCast (int *on*)

6.42.3.20 BError BSocket::setPriority (Priority *priority*)

6.42.3.21 BError BSocket::getMTU (uint32_t & *mtu*)

6.42.3.22 BError BSocket::getAddress (BSocketAddress & *address*)

6.42.4 Member Data Documentation

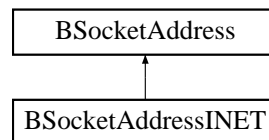
- [BSocket.h](#)
- [BSocket.cpp](#)

6.43 BSocketAddress Class Reference

Socket Address.

```
#include <BSocket.h>
```

Inheritance diagram for BSocketAddress::



Public Types

- typedef struct sockaddr [SockAddr](#)

Public Member Functions

- [BSocketAddress](#) ()
- [BSocketAddress](#) (const [BSocketAddress](#) &add)
- [BSocketAddress](#) ([SockAddr](#) *address, int len)
- [~BSocketAddress](#) ()
- [BError](#) set ([SockAddr](#) *address, int len)
- const [SockAddr](#) * [raw](#) () const
- int [len](#) () const
- [BSocketAddress](#) & [operator=](#) (const [BSocketAddress](#) &add)
- [operator](#) const [SockAddr](#) * () const
- int [operator==](#) (const [BSocketAddress](#) &add) const
- int [operator!=](#) (const [BSocketAddress](#) &add) const

Private Attributes

- int [olen](#)
- [SockAddr](#) * [oaddress](#)

6.43.1 Detailed Description

Socket Address.

6.43.2 Member Typedef Documentation

6.43.2.1 `typedef struct sockaddr BSocketAddress::SockAddr` [read]

6.43.3 Constructor & Destructor Documentation

6.43.3.1 `BSocketAddress::BSocketAddress ()`

6.43.3.2 `BSocketAddress::BSocketAddress (const BSocketAddress & add)`

6.43.3.3 `BSocketAddress::BSocketAddress (SockAddr * address, int len)`

6.43.3.4 `BSocketAddress::~~BSocketAddress ()`

6.43.4 Member Function Documentation

6.43.4.1 `BError BSocketAddress::set (SockAddr * address, int len)`

6.43.4.2 `const BSocketAddress::SockAddr * BSocketAddress::raw () const`

6.43.4.3 `int BSocketAddress::len () const`

6.43.4.4 `BSocketAddress & BSocketAddress::operator= (const BSocketAddress & add)`

6.43.4.5 `BSocketAddress::operator const SockAddr * () const` [inline]

6.43.4.6 `int BSocketAddress::operator== (const BSocketAddress & add) const`

6.43.4.7 `int BSocketAddress::operator!= (const BSocketAddress & add) const`

6.43.5 Member Data Documentation

6.43.5.1 `int BSocketAddress::olen` [private]

6.43.5.2 `SockAddr* BSocketAddress::oaddress` [private]

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

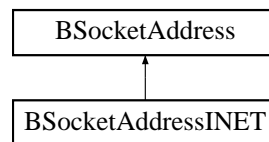
- [BSocket.h](#)
- [BSocket.cpp](#)

6.44 BSocketAddressINET Class Reference

IP aware socket address.

```
#include <BSocket.h>
```

Inheritance diagram for BSocketAddressINET::



Public Types

- typedef struct sockaddr_in [SockAddrIP](#)

Public Member Functions

- [BError](#) set ([BString](#) hostName, uint32_t port)
- [BError](#) set (uint32_t address, uint32_t port)
- [BError](#) set ([BString](#) hostName, [BString](#) service, [BString](#) type)
- void setPort (uint32_t port)
- uint32_t address ()

Returns socket ip address.

- uint32_t port ()

Returns socket port.

- [BString](#) getString ()

Return string version of address <ip>:<port>.

Static Public Member Functions

- static [BString](#) getHostName ()

Get this hosts network name.

- static [BList](#)< uint32_t > getIpAddresses ()

Get a list of all the IP addresses of this host.

- static [BList](#)< [BString](#) > getIpAddressList ()

Get a list of all the IP addresses of this host under hostname.

- static [BList](#)< [BString](#) > getIpAddressListAll ()

Get a list of all the IP addresses of this host looking at physical interfaces.

6.44.1 Detailed Description

IP aware socket address.

6.44.2 Member Typedef Documentation

6.44.2.1 `typedef struct sockaddr_in BSocketAddressINET::SockAddrIP` [read]

6.44.3 Member Function Documentation

6.44.3.1 `BError BSocketAddressINET::set (BString hostName, uint32_t port)`

6.44.3.2 `BError BSocketAddressINET::set (uint32_t address, uint32_t port)`

6.44.3.3 `BError BSocketAddressINET::set (BString hostName, BString service, BString type)`

6.44.3.4 `void BSocketAddressINET::setPort (uint32_t port)`

6.44.3.5 `uint32_t BSocketAddressINET::address ()`

Returns socket ip address.

6.44.3.6 `uint32_t BSocketAddressINET::port ()`

Returns socket port.

6.44.3.7 `BString BSocketAddressINET::getString ()`

Return string version of address <ip>:<port>.

6.44.3.8 `BString BSocketAddressINET::getHostName ()` [static]

Get this hosts network name.

6.44.3.9 `BList< uint32_t > BSocketAddressINET::getIpAddresses ()` [static]

Get a list of all the IP addresses of this host.

6.44.3.10 `BList< BString > BSocketAddressINET::getIpAddressList ()` [static]

Get a list of all the IP addresses of this host under hostname.

6.44.3.11 `BList< BString > BSocketAddressINET::getIpAddressListAll ()` [static]

Get a list of all the IP addresses of this host looking at physical interfaces.

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

- [BSocket.h](#)

- [BSocket.cpp](#)

6.45 BString Class Reference

```
#include <BString.h>
```

Public Member Functions

- [BString](#) ()
- [BString](#) (const [BString](#) &string)
- [BString](#) (const char *str)
- [BString](#) (char ch)
- [BString](#) (int v)
- [BString](#) (unsigned int v)
- [BString](#) (long v)
- [BString](#) (unsigned long long)
- [BString](#) (double v)
- virtual [~BString](#) ()
- [BString copy](#) ()
Return an independant copy.
- virtual void [strChanged](#) ()
- int [len](#) () const
Length of string.
- const char * [retStr](#) () const
Ptr to char representation.*
- char * [retStrDup](#) () const
Ptr to newly malloc'd char.*
- int [retInt](#) () const
Return string as a int.
- double [retDouble](#) () const
Return string as a double.
- int [compare](#) (const [BString](#) &string) const
Compare strings.
- int [compareWild](#) (const [BString](#) &string) const
Compare string to string with wildcards.
- int [compareWildExpression](#) (const [BString](#) &string) const
Compare string to space delimited patterns.
- [BString add](#) (const [BString](#) &str) const
Add two strings.
- [BString & truncate](#) (int len)
Truncate to length len.

- [BString](#) & [pad](#) (int len)
Pad to length len.
- [BString](#) & [toUpper](#) ()
Convert to uppercase.
- [BString](#) & [toLower](#) ()
Convert to lowercase.
- void [removeNL](#) ()
Remove if present NL from last char.
- [BString](#) [subString](#) (int start, int len) const
Returns substring.
- int [del](#) (int start, int len)
Delete substring.
- int [insert](#) (int start, [BString](#) str)
Insert substring.
- void [printf](#) (const char *fmt,...)
Formatted print into the string.
- int [find](#) (char ch) const
Find ch in string searching forwards.
- int [findReverse](#) (char ch) const
Find ch in string searching backwards.
- [BList](#)< [BString](#) > [getTokenList](#) ([BString](#) separators)
Break string into tokens.
- [BString](#) [removeSeparators](#) ([BString](#) separators)
Remove any char from sepatators from string.
- [BString](#) [pullToken](#) ([BString](#) terminators)
Pull token from start of string.
- [BString](#) [pullSeparators](#) ([BString](#) separators)
Pull separators from start of string.
- [BString](#) [pullWord](#) ()
Pull a word out of the head of the string.
- [BString](#) [pullLine](#) ()
Pull a line out of the head of the string.
- [BString](#) [field](#) (int field) const

- char ** fields ()
- BString & operator= (const BString &string)
- char & operator[] (int pos)
- int operator== (const BString &s) const
- int operator== (const char *s) const
- int operator> (const BString &s) const
- int operator> (const char *s) const
- int operator< (const BString &s) const
- int operator< (const char *s) const
- int operator>= (const BString &s) const
- int operator<= (const BString &s) const
- int operator!= (const BString &s) const
- int operator!= (const char *s) const
- BString operator+ (const BString &s) const
- BString operator+ (const char *s) const
- BString operator+= (const BString &s)
- BString operator+= (const char *s)
- BString operator+ (char ch) const
- BString operator+ (int i) const
- BString operator+ (unsigned int i) const
- BString operator+ (unsigned long long i) const
- operator const char * () const

Static Public Member Functions

- static BString convert (char ch)
Converts char to string.
- static BString convert (int value)
Converts int to string.
- static BString convert (unsigned int value)
Converts uint to string.
- static BString convert (long value)
Converts long to string.
- static BString convert (double value)
Converts double to string.
- static BString convert (unsigned long long value)
Converts u long long to string.
- static BString convertHex (int value)
Converts int to string as hex value.
- static BString convertHex (unsigned int value)
Converts uint to string as hex value.

Protected Attributes

- [BRefData](#) * *ostr*

Private Member Functions

- void [Init](#) (const char **str*)
- int [inString](#) (int *pos*) const
- int [isSpace](#) (char *ch*) const

6.45.1 Constructor & Destructor Documentation

6.45.1.1 BString::BString ()

6.45.1.2 BString::BString (const BString & *string*)

6.45.1.3 BString::BString (const char * *str*)

6.45.1.4 BString::BString (char *ch*)

6.45.1.5 BString::BString (int *v*)

6.45.1.6 BString::BString (unsigned int *v*)

6.45.1.7 BString::BString (long *v*)

6.45.1.8 BString::BString (unsigned long long *value*)

6.45.1.9 BString::BString (double *v*)

6.45.1.10 BString::~~BString () [virtual]

6.45.2 Member Function Documentation

6.45.2.1 BString BString::convert (char *ch*) [static]

Converts char to string.

6.45.2.2 BString BString::convert (int *value*) [static]

Converts int to string.

6.45.2.3 BString BString::convert (unsigned int *value*) [static]

Converts uint to string.

6.45.2.4 BString BString::convert (long *value*) [static]

Converts long to string.

6.45.2.5 BString BString::convert (double *value*) [static]

Converts double to string.

6.45.2.6 BString BString::convert (unsigned long long *value*) [static]

Converts u long long to string.

6.45.2.7 BString BString::convertHex (int *value*) [static]

Converts int to string as hex value.

6.45.2.8 BString BString::convertHex (unsigned int *value*) [static]

Converts uint to string as hex value.

6.45.2.9 BString BString::copy ()

Return an independant copy.

6.45.2.10 void BString::strChanged () [virtual]**6.45.2.11 int BString::len () const**

Length of string.

6.45.2.12 const char * BString::retStr () const

Ptr to char* representation.

6.45.2.13 char * BString::retStrDup () const

Ptr to newly malloc'd char*.

6.45.2.14 int BString::retInt () const

Return string as a int.

6.45.2.15 double BString::retDouble () const

Return string as a double.

6.45.2.16 int BString::compare (const BString & *string*) const

Compare strings.

6.45.2.17 int BString::compareWild (const BString & *string*) const

Compare string to string with wildcards.

6.45.2.18 int BString::compareWildExpression (const BString & *string*) const

Compare string to space delimited patterns.

6.45.2.19 BString BString::add (const BString & *str*) const

Add two strings.

6.45.2.20 BString & BString::truncate (int *len*)

Truncate to length len.

6.45.2.21 BString & BString::pad (int *len*)

Pad to length len.

6.45.2.22 BString & BString::toUpper ()

Convert to uppercase.

6.45.2.23 BString & BString::toLower ()

Convert to lowercase.

6.45.2.24 void BString::removeNL ()

Remove if present NL from last char.

6.45.2.25 BString BString::subString (int *start*, int *len*) const

Returns substring.

6.45.2.26 int BString::del (int *start*, int *len*)

Delete substring.

6.45.2.27 int BString::insert (int *start*, BString *str*)

Insert substring.

6.45.2.28 void BString::printf (const char **fmt*, ...)

Formatted print into the string.

6.45.2.29 int BString::find (char *ch*) const

Find *ch* in string searching forwards.

6.45.2.30 int BString::findReverse (char *ch*) const

Find *ch* in string searching backwards.

6.45.2.31 BList< BString > BString::getTokenList (BString *separators*)

Break string into tokens.

6.45.2.32 BString BString::removeSeparators (BString *separators*)

Remove any char from separators from string.

6.45.2.33 BString BString::pullToken (BString *terminators*)

Pull token from start of string.

6.45.2.34 BString BString::pullSeparators (BString *separators*)

Pull separators from start of string.

6.45.2.35 BString BString::pullWord ()

Pull a word out of the head of the string.

6.45.2.36 BString BString::pullLine ()

Pull a line out of the head of the string.

- 6.45.2.37 BString BString::field (int *field*) const
- 6.45.2.38 char ** BString::fields ()
- 6.45.2.39 BString & BString::operator= (const BString & *string*)
- 6.45.2.40 char & BString::operator[] (int *pos*)
- 6.45.2.41 int BString::operator== (const BString & *s*) const [inline]
- 6.45.2.42 int BString::operator== (const char * *s*) const [inline]
- 6.45.2.43 int BString::operator> (const BString & *s*) const [inline]
- 6.45.2.44 int BString::operator> (const char * *s*) const [inline]
- 6.45.2.45 int BString::operator< (const BString & *s*) const [inline]
- 6.45.2.46 int BString::operator< (const char * *s*) const [inline]
- 6.45.2.47 int BString::operator>= (const BString & *s*) const [inline]
- 6.45.2.48 int BString::operator<= (const BString & *s*) const [inline]
- 6.45.2.49 int BString::operator!= (const BString & *s*) const [inline]
- 6.45.2.50 int BString::operator!= (const char * *s*) const [inline]
- 6.45.2.51 BString BString::operator+ (const BString & *s*) const [inline]
- 6.45.2.52 BString BString::operator+ (const char * *s*) const [inline]
- 6.45.2.53 BString BString::operator+= (const BString & *s*) [inline]
- 6.45.2.54 BString BString::operator+= (const char * *s*) [inline]
- 6.45.2.55 BString BString::operator+ (char *ch*) const [inline]
- 6.45.2.56 BString BString::operator+ (int *i*) const [inline]
- 6.45.2.57 BString BString::operator+ (unsigned int *i*) const [inline]
- 6.45.2.58 BString BString::operator+ (unsigned long long *i*) const [inline]
- 6.45.2.59 BString::operator const char * () const [inline]
- 6.45.2.60 void BString::Init (const char * *str*) [private]
- 6.45.2.61 int BString::inString (int *pos*) const [private]
- 6.45.2.62 int BString::isSpace (char *ch*) const [private]

6.45.3 Member Data Documentation

6.45.3.1 BString::BString (const char * *str*) const [private]

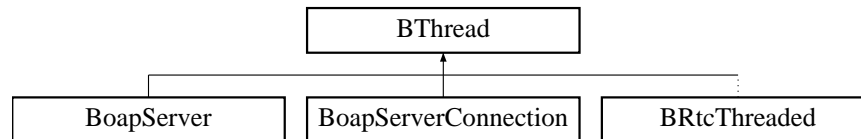
The documentation for this class was generated from the following files:

- [BString.h](#)
- [BString.cpp](#)

6.46 BThread Class Reference

```
#include <BThread.h>
```

Inheritance diagram for BThread::



Public Member Functions

- [BThread](#) ()
- virtual [~BThread](#) ()
- int [setInitPriority](#) (int policy, int priority)
- int [setInitStackSize](#) (size_t stackSize)
- int [start](#) ()
- void * [result](#) ()
- int [running](#) ()
- int [setPriority](#) (int policy, int priority)
- int [cancel](#) ()
- void * [waitForCompletion](#) ()
- pthread_t [getThread](#) ()
- virtual void * [function](#) ()

Static Private Member Functions

- static void * [startFunc](#) (void *)

Private Attributes

- pthread_t [othread](#)
- size_t [ostackSize](#)
- int [opolicy](#)
- int [opriority](#)
- int [orunning](#)
- void * [oresult](#)

6.46.1 Constructor & Destructor Documentation

6.46.1.1 `BThread::BThread ()`

6.46.1.2 `BThread::~~BThread ()` `[virtual]`

6.46.2 Member Function Documentation

6.46.2.1 `int BThread::setInitPriority (int policy, int priority)`

6.46.2.2 `int BThread::setInitStackSize (size_t stackSize)`

6.46.2.3 `int BThread::start ()`

6.46.2.4 `void * BThread::result ()`

6.46.2.5 `int BThread::running ()`

6.46.2.6 `int BThread::setPriority (int policy, int priority)`

6.46.2.7 `int BThread::cancel ()`

6.46.2.8 `void * BThread::waitForCompletion ()`

6.46.2.9 `pthread_t BThread::getThread ()`

6.46.2.10 `void * BThread::function ()` `[virtual]`

Reimplemented in [BoapServerConnection](#), [BoapServer](#), and [BRtcThreaded](#).

6.46.2.11 `void * BThread::startFunc (void * arg)` `[static, private]`

6.46.3 Member Data Documentation

6.46.3.1 `pthread_t BThread::othread` `[private]`

6.46.3.2 `size_t BThread::ostackSize` `[private]`

6.46.3.3 `int BThread::opolicy` `[private]`

6.46.3.4 `int BThread::opriority` `[private]`

6.46.3.5 `int BThread::orunning` `[private]`

6.46.3.6 `void* BThread::oresult` `[private]`

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

- [BThread.h](#)
- [BThread.cpp](#)

6.47 BTimer Class Reference

Stopwatch style timer.

```
#include <BTimer.h>
```

Public Member Functions

- [BTimer](#) ()
- [~BTimer](#) ()
- void [start](#) ()
Start timer.
- void [stop](#) ()
Stop timer.
- void [clear](#) ()
Clear timer.
- double [getElapsedTime](#) ()
Returns the elapsed time from the last start.
- void [add](#) ([BTimer](#) &timer)
Add two timers.
- double [average](#) ()
Average time is duration between [start\(\)](#) and [stop\(\)](#) / number of stops.
- double [peak](#) ()
Peak time.

Static Private Member Functions

- static double [getTime](#) ()

Private Attributes

- [BMutex](#) olock
- unsigned int [onum](#)
- double [ostartTime](#)
- double [oendTime](#)
- double [oaverage](#)
- double [opeak](#)

6.47.1 Detailed Description

Stopwatch style timer.

6.47.2 Constructor & Destructor Documentation

6.47.2.1 BTimer::BTimer ()

6.47.2.2 BTimer::~~BTimer ()

6.47.3 Member Function Documentation

6.47.3.1 void BTimer::start ()

Start timer.

6.47.3.2 void BTimer::stop ()

Stop timer.

6.47.3.3 void BTimer::clear ()

Clear timer.

6.47.3.4 double BTimer::getElapsedTime ()

Returns the elapsed time from the last start.

6.47.3.5 void BTimer::add (BTimer & *timer*)

Add two timers.

6.47.3.6 double BTimer::average ()

Average time is duration between [start\(\)](#) and [stop\(\)](#) / number of stops.

6.47.3.7 double BTimer::peak ()

Peak time.

6.47.3.8 `double BTimer::getTime ()` [static, private]

6.47.4 Member Data Documentation

6.47.4.1 `BMutex BTimer::olock` [private]

6.47.4.2 `unsigned int BTimer::onum` [private]

6.47.4.3 `double BTimer::ostartTime` [private]

6.47.4.4 `double BTimer::oendTime` [private]

6.47.4.5 `double BTimer::oaverage` [private]

6.47.4.6 `double BTimer::opeak` [private]

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

- [BTimer.h](#)
- [BTimer.cpp](#)

6.48 BUrl Class Reference

Basic access to a Url.

```
#include <BUrl.h>
```

Public Member Functions

- [BUrl \(\)](#)
- [~BUrl \(\)](#)
- [BError readString \(BString url, BString &str\)](#)

Reads URL.

Static Private Member Functions

- static [size_t writeData](#) (void *data, [size_t](#) size, [size_t](#) elSize, void *stream)

Private Attributes

- [BString ores](#)

Static Private Attributes

- static [int oinit](#)

6.48.1 Detailed Description

Basic access to a Url.

6.48.2 Constructor & Destructor Documentation

6.48.2.1 BUrl::BUrl ()

6.48.2.2 BUrl::~~BUrl ()

6.48.3 Member Function Documentation

6.48.3.1 BError BUrl::readString (BString url, BString & str)

Reads URL.

6.48.3.2 `size_t BUrl::writeData (void * data, size_t size, size_t elSize, void * stream)` [static, private]

6.48.4 Member Data Documentation

6.48.4.1 `int BUrl::oinit` [static, private]

6.48.4.2 `BString BUrl::ores` [private]

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

- [BUrl.h](#)
- [BUrl.cpp](#)

Chapter 7

LibBeamApi File Documentation

7.1 BArray.h File Reference

```
#include <BTypes.h>
#include <vector>
```

Classes

- class [BArray< T >](#)

Defines

- #define [BArray_H 1](#)

7.1.1 Define Documentation

7.1.1.1 #define BArray_H 1

7.2 BBuffer.cpp File Reference

```
#include <stdlib.h>
#include <memory.h>
#include <BBuffer.h>
```

Defines

- #define [SIZE](#) 1024

7.2.1 Define Documentation

7.2.1.1 #define SIZE 1024

7.3 BBuffer.h File Reference

```
#include <stdint.h>
```

Classes

- class [BBuffer](#)

Defines

- #define [BBUFFER_H](#) 1

7.3.1 Define Documentation

7.3.1.1 #define BBUFFER_H 1

7.4 BCond.cpp File Reference

```
#include <BCond.h>
#include <sys/time.h>
#include <stdio.h>
```


7.5 BCond.h File Reference

```
#include <pthread.h>
```

Classes

- class [BCond](#)

Defines

- #define [BCOND_H](#) 1

7.5.1 Define Documentation

7.5.1.1 #define BCOND_H 1

7.6 BCondInt.cpp File Reference

```
#include <BCondInt.h>
#include <sys/time.h>
#include <stdio.h>
#include <errno.h>
```

7.7 BCondInt.h File Reference

```
#include <BTypes.h>
#include <pthread.h>
```

Classes

- class [BCondValue](#)
Thread conditional value.
- class [BCondInt](#)
Thread conditional integer.
- class [BCondBool](#)
Thread conditional boolean.
- class [BCondWrap](#)

Defines

- #define [BCONDINT_H](#) 1

7.7.1 Define Documentation

7.7.1.1 #define BCONDINT_H 1

7.8 BDir.cpp File Reference

```
#include <BDir.h>
#include <dirent.h>
#include <stdlib.h>
#include <errno.h>
#include <string.h>
```

Functions

- static int [wild](#) (const dirent *e)

Variables

- static [BString wildString](#)

7.8.1 Function Documentation

7.8.1.1 static int wild (const dirent *e) [static]

7.8.2 Variable Documentation

7.8.2.1 BString wildString [static]

7.9 BDir.h File Reference

```
#include <BList.h>
#include <BString.h>
#include <BError.h>
#include <sys/stat.h>
```

Classes

- class [BDir](#)
File system directory class.

Defines

- #define [BDIR_H](#) 1

7.9.1 Define Documentation

7.9.1.1 #define BDIR_H 1

7.10 BEntry.cpp File Reference

```
#include <ctype.h>
#include <stdio.h>
#include <string.h>
#include <unistd.h>
#include <fcntl.h>
#include <errno.h>
#include <BEntry.h>
```

7.11 BEntry.h File Reference

```
#include <BList.h>
#include <BString.h>
```

Classes

- class [BEntry](#)
Manipulate a name value pair.
- class [BEntryList](#)
List of Entries. Where an entry is a name value pair.
- class [BEntryFile](#)
File of Entries.

7.12 BError.cpp File Reference

```
#include <BError.h>
```


7.13 BError.h File Reference

```
#include <BString.h>
```

Classes

- class [BError](#)
Error return class.

Defines

- #define [BERROR_H](#) 1

7.13.1 Define Documentation

7.13.1.1 #define BERROR_H 1

7.14 BEvent.cpp File Reference

```
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>
#include <BEvent.h>
#include <BPoll.h>
```

7.15 BEvent.h File Reference

```
#include <stdint.h>
#include <BError.h>
```

Classes

- class [BEvent](#)

This class provides a base class for all event objects that can be sent over the events interface.

- class [BEventError](#)
- class [BEventPipe](#)

This class provides a base interface for sending events via a pipe. This allows threads to send events that can be picked up by the poll system call.

- class [BEventInt](#)

This class provides an interface for sending simple integer events via a file descriptor. This allows threads to send events that can be picked up by the poll system call.

Defines

- #define [BEvent_H](#) 1

Enumerations

- enum [BEventType](#) { [BEventTypeNone](#), [BEventTypeInt](#), [BEventTypeError](#) }

7.15.1 Define Documentation

7.15.1.1 #define BEvent_H 1

7.15.2 Enumeration Type Documentation

7.15.2.1 enum BEventType

Enumerator:

BEventTypeNone

BEventTypeInt

BEventTypeError

7.16 BFile.cpp File Reference

```
#include <BFile.h>
#include <sys/stat.h>
#include <string.h>
#include <stdarg.h>
#include <errno.h>
```

Defines

- #define [STRBUF](#) 10240

7.16.1 Define Documentation

7.16.1.1 #define STRBUF 10240

7.17 BFile.h File Reference

```
#include <stdio.h>
#include <BString.h>
#include <BError.h>
```

Classes

- class [BFile](#)
File operations class.

Defines

- #define [BFILE_H](#) 1

7.17.1 Define Documentation

7.17.1.1 #define BFILE_H 1

7.18 BList.h File Reference

```
#include <BList_func.h>
```

Classes

- class [BIter](#)
Iterator for [BList](#).
- class [BList< T >](#)
Template based list class.
- class [BList< T >::Node](#)

Defines

- #define [BLIST_H](#) 1

7.18.1 Define Documentation

7.18.1.1 #define BLIST_H 1

7.19 BList_func.h File Reference

```
#include <stdlib.h>  
#include <stdio.h>  
#include <memory.h>
```

7.20 BMutex.cpp File Reference

```
#include <BMutex.h>
```

Defines

- #define [MDEBUG](#) 0

7.20.1 Define Documentation

7.20.1.1 #define MDEBUG 0

7.21 BMutex.h File Reference

```
#include <pthread.h>
```

Classes

- class [BMutex](#)
Mutex class.

Defines

- #define [BMUTEX_H](#) 1

7.21.1 Define Documentation

7.21.1.1 #define BMUTEX_H 1

7.22 BNameValue.h File Reference

```
#include <BList.h>
#include <BString.h>
```

Classes

- class [BNameValue< T >](#)
- class [BNameValueList< T >](#)

Defines

- #define [BNAMEVALUE_H](#) 1
- #define [TEMPLATE_NEW](#) 1

7.22.1 Define Documentation

7.22.1.1 [#define BNAMEVALUE_H](#) 1

7.22.1.2 [#define TEMPLATE_NEW](#) 1

7.23 Boap.cpp File Reference

```
#include <stdlib.h>
#include <stdio.h>
#include <errno.h>
#include <unistd.h>
#include <sys/socket.h>
#include <netinet/in.h>
#include <netinet/tcp.h>
#include <Boap.h>
#include <byteswap.h>
#include <BoapnsD.h>
#include <BoapnsC.h>
```

Defines

- #define [DEBUG](#) 0
- #define [APIVERSION_TEST](#) 1
- #define [dprintf](#)(fmt, a...)
- #define [IS_BIG_ENDIAN](#) 1

Functions

- static void [swap8](#) (char *d, char *s)
- static void [swap16](#) (char *d, char *s)
- static void [swap32](#) (char *d, char *s)
- static void [swap64](#) (char *d, char *s)

Variables

- const int [boapPort](#) = 12000

The default BOAP connection port.

- const int [roundSize](#) = 256

7.23.1 Define Documentation

7.23.1.1 `#define APIVERSION_TEST 1`

7.23.1.2 `#define DEBUG 0`

7.23.1.3 `#define dprintf(fmt, a...)`

7.23.1.4 `#define IS_BIG_ENDIAN 1`

7.23.2 Function Documentation

7.23.2.1 `static void swap16 (char * d, char * s)` `[inline, static]`

7.23.2.2 `static void swap32 (char * d, char * s)` `[inline, static]`

7.23.2.3 `static void swap64 (char * d, char * s)` `[inline, static]`

7.23.2.4 `static void swap8 (char * d, char * s)` `[inline, static]`

7.23.3 Variable Documentation

7.23.3.1 `const int boapPort = 12000`

The default BOAP connection port.

7.23.3.2 `const int roundSize = 256`

7.24 Boap.h File Reference

```
#include <stdint.h>
#include <BPoll.h>
#include <BSocket.h>
#include <BThread.h>
#include <BError.h>
#include <BEvent.h>
#include <BMutex.h>
#include <BTypes.h>
```

Namespaces

- namespace [Boapns](#)

Classes

- struct [BoapPacketHead](#)
- class [BoapPacket](#)
- class [BoapClientObject](#)
- class [BoapSignalObject](#)
- class [BoapServiceEntry](#)
- class [BoapServerConnection](#)
- class [BoapServer](#)
- class [BoapFuncEntry](#)
- class [BoapServiceObject](#)

Typedefs

- typedef [UInt32](#) [BoapService](#)
- typedef [BError](#)([BoapServiceObject](#)::* [BoapFunc](#))([BoapServerConnection](#) *conn, [BoapPacket](#) &rx, [BoapPacket](#) &tx)

Enumerations

- enum [BoapType](#) {
 [BoapTypeRpc](#), [BoapTypeRpcReply](#), [BoapTypeSignal](#), [BoapTypeRpc](#),
 [BoapTypeSignal](#) }
- enum [BoapPriority](#) { [BoapPriorityLow](#), [BoapPriorityNormal](#), [BoapPriorityHigh](#) }

Variables

- const [UInt32](#) [BoapMagic](#) = 0x424F4100

7.24.1 Typedef Documentation

7.24.1.1 `typedef BError(BoapServiceObject::* BoapFunc)(BoapServerConnection *conn, BoapPacket &rx, BoapPacket &tx)`

7.24.1.2 `typedef UInt32 BoapService`

7.24.2 Enumeration Type Documentation

7.24.2.1 `enum BoapPriority`

Enumerator:

BoapPriorityLow

BoapPriorityNormal

BoapPriorityHigh

7.24.2.2 `enum BoapType`

Enumerator:

BoapTypeRpc

BoapTypeRpcReply

BoapTypeSignal

BoapTypeRpc

BoapTypeSignal

7.24.3 Variable Documentation

7.24.3.1 `const UInt32 BoapMagic = 0x424F4100`

7.25 BoapnsC.cc File Reference

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

Namespaces

- namespace [Boapns](#)

Functions

- [Boapns::Boapns](#) (BString name)
- [BError Boapns::getVersion](#) (BString &version)
- [BError Boapns::getEntryList](#) (BList< BoapEntry > &entryList)
- [BError Boapns::getEntry](#) (BString name, BoapEntry &entry)
- [BError Boapns::addEntry](#) (BoapEntry entry)
- [BError Boapns::delEntry](#) (BString name)
- [BError Boapns::getNewName](#) (BString &name)

7.26 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>
```

Namespaces

- namespace [Boapns](#)

Classes

- class [Boapns::Boapns](#)

Defines

- #define [BOAPNSC_H](#) 1

Variables

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

7.26.1 Define Documentation

7.26.1.1 #define BOAPNSC_H 1

7.27 BoapnsD.cc File Reference

```
#include <BoapnsD.h>
```

Namespaces

- namespace [Boapns](#)

7.28 BoapnsD.h File Reference

```
#include <Boap.h>
#include <BList.h>
#include <BArray.h>
```

Namespaces

- namespace [Boapns](#)

Classes

- class [Boapns::BoapEntry](#)

Defines

- #define [BOAPNSD_H](#) 1

7.28.1 Define Documentation

7.28.1.1 #define BOAPNSD_H 1

7.29 BoapSimple.cc File Reference

```
#include <stdlib.h>
#include <stdio.h>
#include <errno.h>
#include <sys/socket.h>
#include <netinet/in.h>
#include <Boap.h>
#include <BoapnsD.h>
#include <BoapnsC.h>
```

Defines

- #define `DEBUG` 0
- #define `dprintf`(fmt, a...)

Variables

- const int `roundSize` = 256

7.29.1 Define Documentation

7.29.1.1 #define `DEBUG` 0

7.29.1.2 #define `dprintf`(fmt, a...)

7.29.2 Variable Documentation

7.29.2.1 const int `roundSize` = 256

7.30 BoapSimple.h File Reference

```
#include <stdint.h>
#include <BPoll.h>
#include <BSocket.h>
#include <BError.h>
```

Classes

- struct [BoapPacketHead](#)
- class [BoapPacket](#)
- class [BoapClientObject](#)
- class [BoapSignalObject](#)
- class [BoapServiceEntry](#)
- class [BoapServer](#)
- class [BoapFuncEntry](#)
- class [BoapServiceObject](#)

Typedefs

- typedef int8_t [Int8](#)
- typedef uint8_t [UInt8](#)
- typedef int16_t [Int16](#)
- typedef uint16_t [UInt16](#)
- typedef int32_t [Int32](#)
- typedef uint32_t [UInt32](#)
- typedef double [Double](#)
- typedef uint32_t [BoapService](#)
- typedef [BError](#)([BoapServiceObject](#)::* [BoapFunc](#))([BoapPacket](#) &rx, [BoapPacket](#) &tx)

Enumerations

- enum [BoapType](#) {
 [BoapTypeRpc](#), [BoapTypeRpcReply](#), [BoapTypeSignal](#), [BoapTypeRpc](#),
 [BoapTypeSignal](#) }

7.30.1 Typedef Documentation

7.30.1.1 `typedef BError(BoapServiceObject::* BoapFunc)(BoapPacket &rx, BoapPacket &tx)`

7.30.1.2 `typedef uint32_t BoapService`

7.30.1.3 `typedef double Double`

7.30.1.4 `typedef int16_t Int16`

7.30.1.5 `typedef int32_t Int32`

7.30.1.6 `typedef int8_t Int8`

7.30.1.7 `typedef uint16_t UInt16`

7.30.1.8 `typedef uint32_t UInt32`

7.30.1.9 `typedef uint8_t UInt8`

7.30.2 Enumeration Type Documentation

7.30.2.1 `enum BoapType`

Enumerator:

BoapTypeRpc

BoapTypeRpcReply

BoapTypeSignal

BoapTypeRpc

BoapTypeSignal

7.31 BObject.cc File Reference

```
#include <stdio.h>
#include <ctype.h>
#include <memory.h>
#include <string.h>
#include <BObject.h>
#include <iostream>
```

Defines

- #define [DEBUG](#) 0

7.31.1 Define Documentation

7.31.1.1 #define DEBUG 0

7.32 BObject.h File Reference

```
#include <BType.h>
#include <BDataBuf.h>
#include <BString.h>
#include <BNameValue.h>
#include <BList.h>
#include <BError.h>
```

Classes

- class [BObject](#)

Defines

- #define [BOBJECT_H](#) 1

Typedefs

- typedef [BNameValue](#)< [BObject](#) * > [BMember](#)
- typedef [BNameValueList](#)< [BObject](#) * > [BMemberList](#)

7.32.1 Define Documentation

7.32.1.1 #define BOBJECT_H 1

7.32.2 Typedef Documentation

7.32.2.1 typedef BNameValue<BObject*> BMember

7.32.2.2 typedef BNameValueList<BObject*> BMemberList

7.33 BPoll-1.cpp File Reference

```
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>
#include <BPoll.h>
```


7.34 BPoll.cpp File Reference

```
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>
#include <BPoll.h>
```

7.35 BPoll.h File Reference

```
#include <BList.h>
#include <BError.h>
#include <sys/poll.h>
```

Classes

- class [BPoll](#)

This class provides an interface for polling a number of file descriptors. It uses round robin polling.

Defines

- #define [BPOLL_H](#) 1

7.35.1 Define Documentation

7.35.1.1 #define BPOLL_H 1

7.36 BRefData.cpp File Reference

```
#include <stdlib.h>
#include <string.h>
#include <BRefData.h>
```

Defines

- #define [DEBUG](#) 0
- #define [CHUNK](#) 16

7.36.1 Define Documentation

7.36.1.1 #define [CHUNK](#) 16

7.36.1.2 #define [DEBUG](#) 0

7.37 BRefData.h File Reference

Classes

- class [BRefData](#)
Referenced data storage.

Defines

- `#define BREFDATA_H 1`

7.37.1 Define Documentation

7.37.1.1 `#define BREFDATA_H 1`

7.38 BRtc.cpp File Reference

```
#include <BRtc.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <errno.h>
#include <unistd.h>
#include <fcntl.h>
#include <sys/ioctl.h>
#include <linux/rtc.h>
```

7.39 BRtc.h File Reference

```
#include <BError.h>
#include <BThread.h>
#include <BCond.h>
```

Classes

- class [BRtc](#)
Realtime clock.
- class [BRtcThreaded](#)
Threaded real time clock.

7.40 BRWLock.cpp File Reference

```
#include <BRWLock.h>
```

7.41 BRWLock.h File Reference

```
#include <pthread.h>
```

Classes

- class [BRWLock](#)
thread read-write locks

Defines

- #define [BRWLOCK_H](#) 1

7.41.1 Define Documentation

7.41.1.1 #define BRWLOCK_H 1

7.42 BSema.cpp File Reference

```
#include <BSema.h>  
#include <errno.h>  
#include <sys/time.h>
```

7.43 BSema.h File Reference

```
#include <semaphore.h>
```

Classes

- class [BSema](#)
Sempahore class.

Defines

- #define [BSEMA_H](#) 1

7.43.1 Define Documentation

7.43.1.1 #define BSEMA_H 1

7.44 BSocket.cpp File Reference

```
#include <stdlib.h>
#include <unistd.h>
#include <stdio.h>
#include <errno.h>
#include <sys/types.h>
#include <sys/socket.h>
#include <arpa/inet.h>
#include <netdb.h>
#include <net/if.h>
#include "BSocket.h"
```

Defines

- #define [IP_MTU](#) 14

7.44.1 Define Documentation

7.44.1.1 #define IP_MTU 14

7.45 BSocket.h File Reference

```
#include <BString.h>
#include <BError.h>
#include <BTypes.h>
#include <stdint.h>
#include <sys/types.h>
#include <sys/prctl.h>
```

Classes

- class [BSocketAddress](#)
Socket Address.
- class [BSocketAddressINET](#)
IP aware socket address.
- class [BSocket](#)

Defines

- #define [BSOCKET_H](#) 1

7.45.1 Define Documentation

7.45.1.1 #define BSOCKET_H 1

7.46 BString.cpp File Reference

```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#include <stdarg.h>
#include <ctype.h>
#include "BString.h"
```

Defines

- #define [DEBUG](#) 0
- #define [STRIP](#) 0x7f
- #define [MINUS](#) '-'

Functions

- static int [gmatch](#) (const char *s, const char *p)
- std::ostream & [operator<<](#) (std::ostream &o, [BString](#) &s)
- std::istream & [operator>>](#) (std::istream &i, [BString](#) &s)

7.46.1 Define Documentation

7.46.1.1 #define [DEBUG](#) 0

7.46.1.2 #define [MINUS](#) '-'

7.46.1.3 #define [STRIP](#) 0x7f

7.46.2 Function Documentation

7.46.2.1 static int [gmatch](#) (const char *s, const char *p) [static]

7.46.2.2 std::ostream& [operator<<](#) (std::ostream &o, [BString](#) &s)

7.46.2.3 std::istream& [operator>>](#) (std::istream &i, [BString](#) &s)

7.47 BString.h File Reference

```
#include <BRefData.h>
#include <BList.h>
#include <iostream>
```

Classes

- class [BString](#)

Defines

- #define [BSTRING_H](#) 1

Functions

- std::ostream & [operator<<](#) (std::ostream &o, [BString](#) &s)
- std::istream & [operator>>](#) (std::istream &i, [BString](#) &s)

7.47.1 Define Documentation

7.47.1.1 #define BSTRING_H 1

7.47.2 Function Documentation

7.47.2.1 std::ostream& operator<< (std::ostream & o, BString & s)

7.47.2.2 std::istream& operator>> (std::istream & i, BString & s)

7.48 BThread.cpp File Reference

```
#include <BThread.h>
#include <unistd.h>
#include <errno.h>
#include <sys/types.h>
```

7.49 BThread.h File Reference

```
#include <pthread.h>
```

Classes

- class [BThread](#)

Defines

- #define [BTHREAD_H](#) 1

7.49.1 Define Documentation

7.49.1.1 #define BTHREAD_H 1

7.50 BTimer.cpp File Reference

```
#include <BTimer.h>  
#include <sys/time.h>
```

7.51 BTimer.h File Reference

```
#include <BMutex.h>
```

Classes

- class [BTimer](#)
Stopwatch style timer.

7.52 BTypes.h File Reference

```
#include <stdint.h>
#include <sys/types.h>
#include <vector>
```

Defines

- #define [BTYPES_H](#) 1

Typedefs

- typedef int8_t [BInt8](#)
- typedef uint8_t [BUInt8](#)
- typedef int16_t [BInt16](#)
- typedef uint16_t [BUInt16](#)
- typedef int32_t [BInt32](#)
- typedef uint32_t [BUInt32](#)
- typedef int64_t [BInt64](#)
- typedef uint64_t [BUInt64](#)
- typedef float [BFloat](#)
- typedef double [BDouble](#)
- typedef size_t [BSize](#)
- typedef uint32_t [BUInt](#)
- typedef std::vector< float > [BArrayFloat](#)
- typedef std::vector< double > [BArrayDouble](#)
- typedef int8_t [Int8](#)
- typedef uint8_t [UInt8](#)
- typedef int16_t [Int16](#)
- typedef uint16_t [UInt16](#)
- typedef int32_t [Int32](#)
- typedef uint32_t [UInt32](#)
- typedef int64_t [Int64](#)
- typedef uint64_t [UInt64](#)
- typedef float [Float](#)
- typedef double [Double](#)

7.52.1 Define Documentation

7.52.1.1 `#define BTYPES_H 1`

7.52.2 Typedef Documentation

7.52.2.1 `typedef std::vector<double> BArrayDouble`

7.52.2.2 `typedef std::vector<float> BArrayFloat`

7.52.2.3 `typedef double BDouble`

7.52.2.4 `typedef float BFloat`

7.52.2.5 `typedef int16_t BInt16`

7.52.2.6 `typedef int32_t BInt32`

7.52.2.7 `typedef int64_t BInt64`

7.52.2.8 `typedef int8_t BInt8`

7.52.2.9 `typedef size_t BSize`

7.52.2.10 `typedef uint32_t BUInt`

7.52.2.11 `typedef uint16_t BUInt16`

7.52.2.12 `typedef uint32_t BUInt32`

7.52.2.13 `typedef uint64_t BUInt64`

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7.52.2.15 `typedef double Double`

7.52.2.16 `typedef float Float`

7.52.2.17 `typedef int16_t Int16`

7.52.2.18 `typedef int32_t Int32`

7.52.2.19 `typedef int64_t Int64`

7.52.2.20 `typedef int8_t Int8`

7.52.2.21 `typedef uint16_t UInt16`

7.52.2.22 `typedef uint32_t UInt32`

7.52.2.23 `typedef uint64_t UInt64`

7.52.2.24 `typedef uint8_t UInt8`

7.53 BUrl.cpp File Reference

```
#include <stdio.h>
#include <stdlib.h>
#include <memory.h>
#include <BUrl.h>
#include <curl/curl.h>
```

7.54 BUrl.h File Reference

```
#include <stdio.h>
#include <BString.h>
#include <BError.h>
```

Classes

- class [BUrl](#)
Basic access to a Url.

Defines

- #define [BURL_H](#) 1

7.54.1 Define Documentation

7.54.1.1 #define [BURL_H](#) 1

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