

Message Objects

Introduction

The **Message** module manages text strings associated with the error code return values. Each error return value has a unique value which can be decoded using the Message methods and macros.

Methods

Configuration and Information Methods

[mpiMessage](#)

[mpiMessageFunction](#)

Associate message text with a function

Macros

[mpiMessageID](#)

[mpiMessageMODULE](#)

[mpiMessageNUMBER](#)

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mpiMessage

Declaration

```
const char *mpiMessage(long messageId,
                      char *messageText)
```

Required Header

stdmpi.h

Description

mpiMessage returns the text message associated with *messageId* and copies the text to *messageText* if *messageText* is not NULL.

If "messageText" is	Then
NULL	<i>Message</i> returns a pointer to message text resident in the library
not NULL	<i>Message</i> returns the pointer <i>messageText</i> , which must point to a buffer large enough to hold the message text (that will be copied into it)

Return Values

NULL	if messageId is invalid
Pointer to an empty string (" ")	if the messge utility is not enabled or the message function pointer associated with <i>messageId</i> is NULL.
Pointer to a non-zero-length string	if the mpiMessage successfully retrieves the message associated with <i>messageId</i> .

See Also

[mpiMessageFunction](#)

mpiMessageFunction

Declaration

```
long mpiMessageFunction(MPIModuleId moduleID,  
                         MPIMessageFunction function)
```

Required Header

stdmpi.h

Description

MessageFunction registers *function* as the function to be called by **mpiMessage(...)** (in order to obtain the text for a message associated with module *moduleId*).

MessageFunction is typically called internally by object create methods. Applications generally do not need to call *MessageFunction* directly.

Return Values

MPIMessageOK	if <i>MessageFunction</i> successfully registers <i>function</i> as the function to be called by mpiMessage(...)
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See Also

[mpiMessage](#)

mpiMessageID

Declaration

```
#define mpiMessageID(module number) \
((long)((((module) & MPIModuleIdMAX) << 8) | \
((number) & 0xFF)))
```

Required Header stdmpi.h

Description **MessageID** converts the message module value and number to a unique message identification value.

See Also [mpiMessage](#)

mpiMessageMODULE

Declaration

```
#define mpiMessageMODULE(messageId) \  
((messageId) & (MPIModuleIdMAX << 8)) >> 8)
```

Required Header stdmpi.h

Description **MessageMODULE** converts the message identification value to the message module value.

See Also [mpiMessage](#)

mpiMessageNUMBER

Declaration

```
#define mpiMessageNUMBER(messageId) ((messageId) & 0xFF)
```

Required Header stdmpi.h

Description **MessageNUMBER** converts the message identification value to the message number.

See Also [mpiMessage](#)