

NAME

ERR_GET_LIB, ERR_GET_REASON, ERR_FATAL_ERROR – get information from error codes

SYNOPSIS

```
#include <openssl/err.h>

int ERR_GET_LIB(unsigned long e);

int ERR_GET_REASON(unsigned long e);

int ERR_FATAL_ERROR(unsigned long e);
```

DESCRIPTION

The error code returned by **ERR_get_error()** consists of a library number and reason code. **ERR_GET_LIB()** and **ERR_GET_REASON()** can be used to extract these.

ERR_FATAL_ERROR() indicates whether a given error code is a fatal error.

The library number describes where the error occurred, the reason code is the information about what went wrong.

Each sub-library of OpenSSL has a unique library number; the reason code is unique within each sub-library. Note that different libraries may use the same value to signal different reasons.

ERR_R_... reason codes such as **ERR_R_MALLOC_FAILURE** are globally unique. However, when checking for sub-library specific reason codes, be sure to also compare the library number.

ERR_GET_LIB(), **ERR_GET_REASON()**, and **ERR_FATAL_ERROR()** are macros.

RETURN VALUES

The library number, reason code, and whether the error is fatal, respectively. Starting with OpenSSL 3.0.0, the function code is always set to zero.

NOTES

Applications should not make control flow decisions based on specific error codes. Error codes are subject to change at any time (even in patch releases of OpenSSL). A particular error code can only be considered meaningful for control flow decisions if it is explicitly documented as such. New failure codes may still appear at any time.

SEE ALSO

ERR_get_error(3)

HISTORY

ERR_GET_LIB() and **ERR_GET_REASON()** are available in all versions of OpenSSL.

ERR_GET_FUNC() was removed in OpenSSL 3.0.

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