

NAME

BIO_printf, BIO_vprintf, BIO_snprintf, BIO_vsnprintf - formatted output to a BIO

SYNOPSIS

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

```
int BIO_printf(BIO *bio, const char *format, ...);
```

```
int BIO_vprintf(BIO *bio, const char *format, va_list args);
```

```
int BIO_snprintf(char *buf, size_t n, const char *format, ...);
```

```
int BIO_vsnprintf(char *buf, size_t n, const char *format, va_list args);
```

DESCRIPTION

BIO_printf() is similar to the standard C **printf()** function, except that the output is sent to the specified BIO, *bio*, rather than standard output. All common format specifiers are supported.

BIO_vprintf() is similar to the **vprintf()** function found on many platforms, the output is sent to the specified BIO, *bio*, rather than standard output. All common format specifiers are supported. The argument list *args* is a stdarg argument list.

BIO_snprintf() is for platforms that do not have the common **snprintf()** function. It is like **sprintf()** except that the size parameter, *n*, specifies the size of the output buffer.

BIO_vsnprintf() is to **BIO_snprintf()** as **BIO_vprintf()** is to **BIO_printf()**.

RETURN VALUES

All functions return the number of bytes written, or -1 on error. For **BIO_snprintf()** and **BIO_vsnprintf()** this includes when the output buffer is too small.

NOTES

Except when *n* is 0, both **BIO_snprintf()** and **BIO_vsnprintf()** always terminate their output with `'\0'`. This includes cases where -1 is returned, such as when there is insufficient space to output the whole string.

COPYRIGHT

Copyright 2017-2021 The OpenSSL Project Authors. All Rights Reserved.

Licensed under the Apache License 2.0 (the "License"). You may not use this file except in compliance with the License. You can obtain a copy in the file LICENSE in the source distribution or at <https://www.openssl.org/source/license.html>.