



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'BIO_ADDR_service_string.3oss1' command

\$ man BIO_ADDR_service_string.3oss1

BIO_ADDR(3oss1) OpenSSL BIO_ADDR(3oss1)

NAME

BIO_ADDR, BIO_ADDR_new, BIO_ADDR_clear, BIO_ADDR_free,
BIO_ADDR_rawmake, BIO_ADDR_family, BIO_ADDR_rawaddress,
BIO_ADDR_rawport, BIO_ADDR_hostname_string, BIO_ADDR_service_string,
BIO_ADDR_path_string - BIO_ADDR routines

SYNOPSIS

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

typedef union bio_addr_st BIO_ADDR;

BIO_ADDR *BIO_ADDR_new(void);
void BIO_ADDR_free(BIO_ADDR *);
void BIO_ADDR_clear(BIO_ADDR *ap);
int BIO_ADDR_rawmake(BIO_ADDR *ap, int family,
                    const void *where, size_t wherelen, unsigned short port);
int BIO_ADDR_family(const BIO_ADDR *ap);
int BIO_ADDR_rawaddress(const BIO_ADDR *ap, void *p, size_t *l);
unsigned short BIO_ADDR_rawport(const BIO_ADDR *ap);
char *BIO_ADDR_hostname_string(const BIO_ADDR *ap, int numeric);
```

```
char *BIO_ADDR_service_string(const BIO_ADDR *ap, int numeric);  
char *BIO_ADDR_path_string(const BIO_ADDR *ap);
```

DESCRIPTION

The `BIO_ADDR` type is a wrapper around all types of socket addresses that OpenSSL deals with, currently transparently supporting `AF_INET`, `AF_INET6` and `AF_UNIX` according to what's available on the platform at hand.

`BIO_ADDR_new()` creates a new unfilled `BIO_ADDR`, to be used with routines that will fill it with information, such as `BIO_accept_ex()`.

`BIO_ADDR_free()` frees a `BIO_ADDR` created with `BIO_ADDR_new()`.

`BIO_ADDR_clear()` clears any data held within the provided `BIO_ADDR` and sets it back to an uninitialised state.

`BIO_ADDR_rawmake()` takes a protocol family, a byte array of size `wherelen` with an address in network byte order pointed at by `where` and a port number in network byte order in `port` (except for the `AF_UNIX` protocol family, where `port` is meaningless and therefore ignored) and populates the given `BIO_ADDR` with them. In case this creates a `AF_UNIX` `BIO_ADDR`, `wherelen` is expected to be the length of the path string (not including the terminating NUL, such as the result of a call to `strlen()`). Read on about the addresses in "RAW ADDRESSES" below.

`BIO_ADDR_family()` returns the protocol family of the given `BIO_ADDR`.

The possible non-error results are one of the constants `AF_INET`, `AF_INET6` and `AF_UNIX`. It will also return `AF_UNSPEC` if the `BIO_ADDR` has not been initialised.

`BIO_ADDR_rawaddress()` will write the raw address of the given `BIO_ADDR` in the area pointed at by `p` if `p` is non-NULL, and will set `*l` to be the

amount of bytes the raw address takes up if `l` is non-NULL. A technique to only find out the size of the address is a call with `p` set to NULL. The raw address will be in network byte order, most significant byte first. In case this is a `AF_UNIX` `BIO_ADDR`, `l` gets the length of the path string (not including the terminating NUL, such as the result of a call to `strlen()`). Read on about the addresses in "RAW ADDRESSES" below.

`BIO_ADDR_rawport()` returns the raw port of the given `BIO_ADDR`. The raw port will be in network byte order.

`BIO_ADDR_hostname_string()` returns a character string with the hostname of the given `BIO_ADDR`. If `numeric` is 1, the string will contain the numerical form of the address. This only works for `BIO_ADDR` of the protocol families `AF_INET` and `AF_INET6`. The returned string has been allocated on the heap and must be freed with `OPENSSL_free()`.

`BIO_ADDR_service_string()` returns a character string with the service name of the port of the given `BIO_ADDR`. If `numeric` is 1, the string will contain the port number. This only works for `BIO_ADDR` of the protocol families `AF_INET` and `AF_INET6`. The returned string has been allocated on the heap and must be freed with `OPENSSL_free()`.

`BIO_ADDR_path_string()` returns a character string with the path of the given `BIO_ADDR`. This only works for `BIO_ADDR` of the protocol family `AF_UNIX`. The returned string has been allocated on the heap and must be freed with `OPENSSL_free()`.

RAW ADDRESSES

Both `BIO_ADDR_rawmake()` and `BIO_ADDR_rawaddress()` take a pointer to a network byte order address of a specific site. Internally, those are treated as a pointer to `struct in_addr` (for `AF_INET`), `struct in6_addr` (for `AF_INET6`) or `char *` (for `AF_UNIX`), all depending on the protocol

family the address is for.

RETURN VALUES

The string producing functions `BIO_ADDR_hostname_string()`, `BIO_ADDR_service_string()` and `BIO_ADDR_path_string()` will return `NULL` on error and leave an error indication on the OpenSSL error stack.

All other functions described here return 0 or `NULL` when the information they should return isn't available.

SEE ALSO

`BIO_connect(3)`, `BIO_s_connect(3)`

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