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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'BIO_lookup_type.3ossl' command

\$ man BIO_lookup_type.3ossl

BIO_ADDRINFO(3ossl) OpenSSL BIO_ADDRINFO(3ossl)

NAME

BIO_lookup_type, BIO_ADDRINFO, BIO_ADDRINFO_next, BIO_ADDRINFO_free, BIO_ADDRINFO_family, BIO_ADDRINFO_socktype, BIO_ADDRINFO_protocol, BIO_ADDRINFO_address, BIO_lookup_ex, BIO_lookup - BIO_ADDRINFO type and routines

SYNOPSIS

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

typedef union bio_addrinfo_st BIO_ADDRINFO;

enum BIO_lookup_type {
    BIO_LOOKUP_CLIENT, BIO_LOOKUP_SERVER
};

int BIO_lookup_ex(const char *host, const char *service, int lookup_type,
                 int family, int socktype, int protocol, BIO_ADDRINFO **res);
int BIO_lookup(const char *host, const char *service,
               enum BIO_lookup_type lookup_type,
               int family, int socktype, BIO_ADDRINFO **res);
```

```
const BIO_ADDRINFO *BIO_ADDRINFO_next(const BIO_ADDRINFO *bai);
int BIO_ADDRINFO_family(const BIO_ADDRINFO *bai);
int BIO_ADDRINFO_socktype(const BIO_ADDRINFO *bai);
int BIO_ADDRINFO_protocol(const BIO_ADDRINFO *bai);
const BIO_ADDR *BIO_ADDRINFO_address(const BIO_ADDRINFO *bai);
void BIO_ADDRINFO_free(BIO_ADDRINFO *bai);
```

DESCRIPTION

The `BIO_ADDRINFO` type is a wrapper for address information types provided on your platform.

`BIO_ADDRINFO` normally forms a chain of several that can be picked at one by one.

`BIO_lookup_ex()` looks up a specified host and service, and uses `lookup_type` to determine what the default address should be if host is `NULL`. `family`, `socktype` and `protocol` are used to determine what protocol family, socket type and protocol should be used for the lookup. `family` can be any of `AF_INET`, `AF_INET6`, `AF_UNIX` and `AF_UNSPEC`. `socktype` can be `SOCK_STREAM`, `SOCK_DGRAM` or 0. Specifying 0 indicates that any type can be used. `protocol` specifies a protocol such as `IPPROTO_TCP`, `IPPROTO_UDP` or `IPPROTO_SCTP`. If set to 0 than any protocol can be used. `res` points at a pointer to hold the start of a `BIO_ADDRINFO` chain.

For the family `AF_UNIX`, `BIO_lookup_ex()` will ignore the service parameter and expects the host parameter to hold the path to the socket file.

`BIO_lookup()` does the same as `BIO_lookup_ex()` but does not provide the ability to select based on the protocol (any protocol may be returned).

`BIO_ADDRINFO_family()` returns the family of the given `BIO_ADDRINFO`.

The result will be one of the constants AF_INET, AF_INET6 and AF_UNIX.

BIO_ADDRINFO_socktype() returns the socket type of the given BIO_ADDRINFO. The result will be one of the constants SOCK_STREAM and SOCK_DGRAM.

BIO_ADDRINFO_protocol() returns the protocol id of the given BIO_ADDRINFO. The result will be one of the constants IPPROTO_TCP and IPPROTO_UDP.

BIO_ADDRINFO_address() returns the underlying BIO_ADDR of the given BIO_ADDRINFO.

BIO_ADDRINFO_next() returns the next BIO_ADDRINFO in the chain from the given one.

BIO_ADDRINFO_free() frees the chain of BIO_ADDRINFO starting with the given one.

RETURN VALUES

BIO_lookup_ex() and BIO_lookup() return 1 on success and 0 when an error occurred, and will leave an error indication on the OpenSSL error stack in that case.

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

NOTES

The BIO_lookup_ex() implementation uses the platform provided getaddrinfo() function. On Linux it is known that specifying 0 for the protocol will not return any SCTP based addresses when calling getaddrinfo(). Therefore, if an SCTP address is required then the protocol parameter to BIO_lookup_ex() should be explicitly set to

IPPROTO_SCTP. The same may be true on other platforms.

HISTORY

The BIO_lookup_ex() function was added in OpenSSL 1.1.1.

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