

NAME

inet_net_ntop, **inet_net_pton** - Internet network number manipulation routines

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

```
#include <sys/socket.h>
```

```
#include <netinet/in.h>
```

```
#include <arpa/inet.h>
```

char *

```
inet_net_ntop(int af, const void *src, int bits, char *dst, size_t size);
```

int

```
inet_net_pton(int af, const char *src, void *dst, size_t size);
```

DESCRIPTION

The **inet_net_ntop**() function converts an Internet network number from network format (usually a *struct in_addr* or some other binary form, in network byte order) to CIDR presentation format (suitable for external display purposes). The *bits* argument is the number of bits in *src* that are the network number. It returns NULL if a system error occurs (in which case, *errno* will have been set), or it returns a pointer to the destination string.

The **inet_net_pton**() function converts a presentation format Internet network number (that is, printable form as held in a character string) to network format (usually a *struct in_addr* or some other internal binary representation, in network byte order). It returns the number of bits (either computed based on the class, or specified with /CIDR), or -1 if a failure occurred (in which case *errno* will have been set. It will be set to ENOENT if the Internet network number was not valid).

The currently supported values for *af* are AF_INET and AF_INET6. The *size* argument is the size of the result buffer *dst*.

NETWORK NUMBERS (IP VERSION 4)

Internet network numbers may be specified in one of the following forms:

a.b.c.d/bits

a.b.c.d

a.b.c

a.b

a

When four parts are specified, each is interpreted as a byte of data and assigned, from left to right, to the four bytes of an Internet network number. Note that when an Internet network number is viewed as a 32-bit integer quantity on a system that uses little-endian byte order (such as the Intel 386, 486, and Pentium processors) the bytes referred to above appear as "d.c.b.a". That is, little-endian bytes are ordered from right to left.

When a three part number is specified, the last part is interpreted as a 16-bit quantity and placed in the least significant two bytes of the Internet network number.

When a two part number is supplied, the last part is interpreted as a 24-bit quantity and placed in the least significant three bytes of the Internet network number.

When only one part is given, the value is stored directly in the Internet network number without any byte rearrangement.

All numbers supplied as "parts" in a '.' notation may be decimal, octal, or hexadecimal, as specified in the C language (i.e., a leading 0x or 0X implies hexadecimal; otherwise, a leading 0 implies octal; otherwise, the number is interpreted as decimal).

SEE ALSO

byteorder(3), inet(3), networks(5)

HISTORY

The `inet_net_ntop()` and `inet_net_pton()` functions appeared in BIND 4.9.4.