

inet_addr - Man Page

IPv4 address manipulation

Prolog

This manual page is part of the POSIX Programmer's Manual. The Linux implementation of this interface may differ (consult the corresponding Linux manual page for details of Linux behavior), or the interface may not be implemented on Linux.

Synopsis

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

```
in_addr_t inet_addr(const char *cp);  
char *inet_ntoa(struct in_addr in);
```

Description

The *inet_addr()* function shall convert the string pointed to by *cp*, in the standard IPv4 dotted decimal notation, to an integer value suitable for use as an Internet address.

The *inet_ntoa()* function shall convert the Internet host address specified by *in* to a string in the Internet standard dot notation.

The *inet_ntoa()* function need not be thread-safe.

All Internet addresses shall be returned in network order (bytes ordered from left to right).

Values specified using IPv4 dotted decimal notation take one of the following forms:

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When four parts are specified, each shall be interpreted as a byte of data and assigned, from left to right, to the four bytes of an Internet address.

a.b.c

When a three-part address is specified, the last part shall be interpreted as a 16-bit quantity and placed in the rightmost two bytes of the network address. This makes the three-part address format convenient for specifying Class B network addresses as **"128.net.host"**.

a.b When a two-part address is supplied, the last part shall be interpreted as a 24-bit quantity and placed in the rightmost three bytes of the network address. This makes the two-part address format convenient for specifying Class A network addresses as **"net.host"**.

a When only one part is given, the value shall be stored directly in the network address without any byte rearrangement.

All numbers supplied as parts in IPv4 dotted decimal notation may be decimal, octal, or hexadecimal, as specified in the ISO C standard (that is, a leading 0x or 0X implies hexadecimal; otherwise, a leading '0' implies octal; otherwise, the number is interpreted as decimal).

Return Value

Upon successful completion, *inet_addr()* shall return the Internet address. Otherwise, it shall return (*in_addr_t*)(-1).

The *inet_ntoa()* function shall return a pointer to the network address in Internet standard dot notation.

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No errors are defined.

The following sections are informative.

Examples

None.

Application Usage

The return value of `inet_ntoa()` may point to static data that may be overwritten by subsequent calls to `inet_ntoa()`.

Rationale

None.

Future Directions

None.

See Also

`endhostent()`, `endnetent()`

The Base Definitions volume of POSIX.1-2017, `<arpa/inet.h>`

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Referenced By

[arpa_inet.h\(0p\)](#), [endservent\(3p\)](#).

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