



Linux Ubuntu 26.04 Manual Pages on command 'getipnodebyaddr.3'

\$ man getipnodebyaddr.3

getipnodebyname(3) Library Functions Manual getipnodebyname(3)

NAME

getipnodebyname, getipnodebyaddr, freehostent - get network hostnames and addresses

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

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

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

```
#include <netdb.h>
```

```
[[deprecated]] struct hostent *getipnodebyname(const char *name, int af,  
                                              int flags, int *error_num);
```

```
[[deprecated]] struct hostent *getipnodebyaddr(size_t size;  
                                              const void addr[size],  
                                              size_t size, int af,  
                                              int *error_num);
```

```
[[deprecated]] void freehostent(struct hostent *ip);
```

DESCRIPTION

These functions are deprecated (and unavailable in glibc). Use getaddrinfo(3) and getnameinfo(3) instead.

The getipnodebyname() and getipnodebyaddr() functions return the names and addresses of a network host. These functions return a pointer to the following structure:

```
struct hostent {  
    char *h_name;
```

```

char **h_aliases;

int  h_addrtype;

int  h_length;

char **h_addr_list;

};

```

These functions replace the `gethostbyname(3)` and `gethostbyaddr(3)` functions, which could access only the IPv4 network address family. The `getipnodebyname()` and `getipnodebyaddr()` functions can access multiple network address families.

Unlike the `gethostby` functions, these functions return pointers to dynamically allocated memory. The `freehostent()` function is used to release the dynamically allocated memory after the caller no longer needs the `hostent` structure.

`getipnodebyname()` arguments

The `getipnodebyname()` function looks up network addresses for the host specified by the `name` argument. The `af` argument specifies one of the following values:

`AF_INET`

The `name` argument points to a dotted-quad IPv4 address or a name of an IPv4 network host.

`AF_INET6`

The `name` argument points to a hexadecimal IPv6 address or a name of an IPv6 network host.

The `flags` argument specifies additional options. More than one option can be specified by bitwise OR-ing them together. `flags` should be set to 0 if no options are desired.

`AI_V4MAPPED`

This flag is used with `AF_INET6` to request a query for IPv4 addresses instead of IPv6 addresses; the IPv4 addresses will be mapped to IPv6 addresses.

`AI_ALL` This flag is used with `AI_V4MAPPED` to request a query for both IPv4 and IPv6 addresses. Any IPv4 address found will be mapped to an IPv6 address.

`AI_ADDRCONFIG`

This flag is used with `AF_INET6` to further request that queries for IPv6 addresses should not be made unless the system has at least one IPv6 address assigned to a network interface, and that queries for IPv4 addresses should not be made unless the system has at least one IPv4 address assigned to a network interface. This flag may be used by itself or with the `AI_V4MAPPED` flag.

AI_DEFAULT

This flag is equivalent to (AI_ADDRCONFIG | AI_V4MAPPED).

getipnodebyaddr() arguments

The getipnodebyaddr() function looks up the name of the host whose network address is specified by the addr argument. The af argument specifies one of the following values:

AF_INET

The addr argument points to a struct in_addr and size must be set to sizeof(struct in_addr).

AF_INET6

The addr argument points to a struct in6_addr and size must be set to sizeof(struct in6_addr).

RETURN VALUE

NULL is returned if an error occurred, and error_num will contain an error code from the following list:

HOST_NOT_FOUND

The hostname or network address was not found.

NO_ADDRESS

The domain name server recognized the network address or name, but no answer was returned. This can happen if the network host has only IPv4 addresses and a request has been made for IPv6 information only, or vice versa.

NO_RECOVERY

The domain name server returned a permanent failure response.

TRY_AGAIN

The domain name server returned a temporary failure response. You might have better luck next time.

A successful query returns a pointer to a hostent structure that contains the following fields:

h_name This is the official name of this network host.

h_aliases

This is an array of pointers to unofficial aliases for the same host. The array is terminated by a null pointer.

h_addrtype

This is a copy of the af argument to getipnodebyname() or getipnodebyaddr(). h_addr?

type will always be AF_INET if the af argument was AF_INET. h_addrtype will always be AF_INET6 if the af argument was AF_INET6.

h_length

This field will be set to sizeof(struct in_addr) if h_addrtype is AF_INET, and to sizeof(struct in6_addr) if h_addrtype is AF_INET6.

h_addr_list

This is an array of one or more pointers to network address structures for the network host. The array is terminated by a null pointer.

STANDARDS

None.

HISTORY

RFC 2553.

Present in glibc 2.1.91-95, but removed again. Several UNIX-like systems support them, but all call them deprecated.

SEE ALSO

getaddrinfo(3), getnameinfo(3), inet_ntop(3), inet_pton(3)

Linux man-pages 6.17

2025-09-21

getipnodebyname(3)