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***Rocky Enterprise Linux 9.2 Manual Pages on command 'getipnodebyaddr.3'***

***\$ man getipnodebyaddr.3***

GETIPNODEBYNAME(3)                      Linux Programmer's Manual                      GETIPNODEBYNAME(3)

**NAME**

getipnodebyname, getipnodebyaddr, freehostent - get network hostnames and addresses

**SYNOPSIS**

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

struct hostent *getipnodebyname(const char *name, int af,
                               int flags, int *error_num);

struct hostent *getipnodebyaddr(const void *addr, size_t len,
                                int af, int *error_num);

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 `len` must be set to `sizeof(struct in_addr)`.

#### AF\_INET6

The `addr` argument points to a `struct in6_addr` and `len` 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_addrtype` 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.

#### CONFORMING TO

RFC 2553.

#### NOTES

These functions were present in glibc 2.1.91-95, but were 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)

#### COLOPHON

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <https://www.kernel.org/doc/man-pages/>.

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GETIPNODEBYNAME(3)