NAME

g_h_b_n, gethostbyname, gethostbyaddr, gethostent, sethostent, endhostent, herror − get network host entry

SYNOPSIS

#include <net/gen/netdb.h>

extern int h_errno;

struct hostent *gethostbyname(name)
char *name;

struct hostent *gethostbyaddr(addr, len, type)
char *addr; int len, type;

struct hostent *gethostent()

sethostent(stayopen)
int stayopen;

endhostent()

herror(string)
char *string;

DESCRIPTION

Gethostbyname and *gethostbyaddr* each return a pointer to an object with the following structure describing an internet host referenced by name or by address, respectively. This structure contains the information obtained from the name server.

```
struct  hostent {
        char    *h_name;         /* official name of host */
        char    **h_aliases;     /* alias list */
        int     h_addrtype;      /* host address type */
        int     h_length;        /* length of address */
        char    **h_addr_list;   /* list of addresses from name server */
};
#define h_addr  h_addr_list[0]   /* address, for backward compatibility */
```

The members of this structure are:

h_name Official name of the host.

h_aliases A zero terminated array of alternate names for the host.

h_addrtype The type of address being returned; currently always AF_INET.

h_length The length, in bytes, of the address.

h_addr_list A zero terminated array of network addresses for the host. Host addresses are returned in network byte order.

h_addr The first address in h_addr_list; this is for backward compatiblity.

When using the nameserver, *gethostbyname* will search for the named host in the current domain and its parents unless the name ends in a dot. If the name contains no dot, and if the environment variable ‘‘HOSTALAIASES’’ contains the name of an alias file, the alias file will first be searched for an alias matching the input name. See *hostname*(7) for the domain search procedure and the alias file format.

Sethostent may be used to request the use of a connected TCP socket for queries. If the *stayopen* flag is non-zero, this sets the option to send all queries to the name server using TCP and to retain the connection after each call to *gethostbyname* or *gethostbyaddr*. Otherwise, queries are performed using UDP datagrams.

Endhostent closes the TCP connection.

DIAGNOSTICS

Error return status from *gethostbyname* and *gethostbyaddr* is indicated by return of a null pointer. The external integer *h_errno* may then be checked to see whether this is a temporary failure or an invalid or unknown host. The routine *herror* can be used to print an error message describing the failure. If its argument *string* is non-NULL, it is printed, followed by a colon and a space. The error message is printed with a trailing newline.

h_errno can have the following values:

HOST_NOT_FOUND	No such host is known.
TRY_AGAIN	This is usually a temporary error and means that the local server did not receive a response from an authoritative server. A retry at some later time may succeed.
NO_RECOVERY	Some unexpected server failure was encountered. This is a non-recoverable error.
NO_DATA	The requested name is valid but does not have an IP address; this is not a temporary error. This means that the name is known to the name server but there is no address associated with this name. Another type of request to the name server using this domain name will result in an answer; for example, a mail-forwarder may be registered for this domain.

SEE ALSO

resolver(3), hostname(7), nonamed(8), named(8)

BUGS

All information is contained in a static area so it must be copied if it is to be saved. Only the Internet address format is currently understood.