NAME

ethers, ether_ntoa, ether_aton, ether_ntohost, ether_hostton, ether_line – Ethernet address mapping operations

SYNOPSIS

cc [*flag* ...] *file* ... **–lsocket -lnsl** [*library* ...]

#include <sys/types.h>
#include <sys/socket.h>
#include <net/if.h>
#include <netinet/in.h>
#include <netinet/if_ether.h>

char *ether_ntoa (struct ether_addr ***e*);**

struct ether_addr *ether_aton (char ***s*);**

int ether_ntohost (char ***hostname*, struct ether_addr ***e***);**

int ether_hostton (char ***hostname*, struct ether_addr ***e***);**

int ether_line (char ***l*, struct ether_addr ***e***, char ***hostname***);**

MT-LEVEL

MT-Safe

DESCRIPTION

These routines are useful for mapping 48 bit Ethernet numbers to their ASCII representations or their corresponding host names, and vice versa.

The function **ether_ntoa( )** converts a 48 bit Ethernet number pointed to by *e* to its standard ASCII representation; it returns a pointer to the ASCII string. The representation is of the form *x* : *x* : *x* : *x* : *x* : *x* where *x* is a hexadecimal number between **0** and **ff**. The function **ether_aton( )** converts an ASCII string in the standard representation back to a 48 bit Ethernet number; the function returns **NULL** if the string cannot be scanned successfully.

The function **ether_ntohost( )** maps an Ethernet number (pointed to by *e*) to its associated hostname. The string pointed to by hostname must be long enough to hold the hostname and a **NULL** character. The function returns zero upon success and non-zero upon failure. Inversely, the function **ether_hostton( )** maps a hostname string to its corresponding Ethernet number; the function modifies the Ethernet number pointed to by *e*. The function also returns zero upon success and non-zero upon failure. In order to do the mapping, both these functions may lookup one or more of the following sources: the ethers file, the NIS maps ''ethers.byname'' and ''ethers.byaddr'' and the NIS+ table ''ethers''. The sources and their lookup order are specified in the **/etc/nsswitch.conf** file (see **nsswitch.conf**(4) for details).

The function **ether_line( )** scans a line (pointed to by *l*) and sets the hostname and the Ethernet number (pointed to by *e*). The string pointed to by hostname must be long enough to hold the hostname and a **NULL** character. The function returns zero upon success and non-zero upon failure. The format of the scanned line is described by **ethers**(4).

FILES

/etc/ethers
/etc/nsswitch.conf

SEE ALSO

ethers(4), **nsswitch.conf**(4)

BUGS

Programs that call **ether_hostton( )** or **ether_ntohost( )** routines cannot be linked statically since the implementation of these routines requires dynamic linker functionality to access shared objects at run time.