and each return a pointer to a structure (see below) describing an internet host referenced by name or by address, as the function names indicate. This structure contains either the information obtained from the name server, or broken-out fields from a line in If the local name server is not running, these routines do a lookup in 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: Official name of the host. A zero-terminated array of alternate names for the host. The type of address being returned; usually The length, in bytes, of the address. A zero-terminated array of network addresses for the host. Host addresses are returned in network byte order. The first address in this is for backward compatibility. When using the nameserver, will search for the named host in each parent domain given in the directive of unless the name contains a dot If the name contains no dot, and if the environment variable contains the name of an alias file, the alias file will first be searched for an alias matching the input name. See for the domain search procedure and the alias file format. is an evolution of intended to allow lookups in address families other than for example, Currently, the argument must be specified as else the function will return after having set to may be used to request the use of a connected TCP socket for queries. If the 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 or Otherwise, queries are performed using UDP datagrams. closes the TCP connection. Name of file containing pairs. See Name of file containing pairs. Error return status from and is indicated by return of a null pointer. The external integer may then be checked to see whether this is a temporary failure or an invalid or unknown host. The routine can be used to print an error message describing the failure. If its argument is non-NULL, it is printed, followed by a colon and a space. The error message is printed with a trailing newline. can have the following values: This indicates an internal error in the library, unrelated to the network or name service. will be valid in this case; see No such host is known. 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. Some unexpected server failure was encountered. This is a non-recoverable error, as one might expect. 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. is defined, and and are redefined, when is built to use only the routines to lookup in and not the name server: reads the next line of opening the file if necessary. is redefined to open and rewind the file. If the argument is non-zero, the hosts data base will not be closed after each call to or is redefined to close the file. 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.