NAME

host − look up host names using domain server

SYNOPSIS

host [-l] [-v] [-w] [-r] [-d] [-t querytype] [-a] host [server]

DESCRIPTION

Host looks for information about Internet hosts. It gets this information from a set of interconnected servers that are spread across the country. By default, it simply converts between host names and Internet addresses. However with the -t or -a options, it can be used to find all of the information about this host that is maintained by the domain server.

The arguments can be either host names or host numbers. The program first attempts to interpret them as host numbers. If this fails, it will treat them as host names. A host number consists of first decimal numbers separated by dots, e.g. 128.6.4.194 A host name consists of names separated by dots, e.g. topaz.rutgers.edu. Unless the name ends in a dot, the local domain is automatically tacked on the end. Thus a Rutgers user can say "host topaz", and it will actually look up "topaz.rutgers.edu". If this fails, the name is tried unchanged (in this case, "topaz"). This same convention is used for mail and other network utilities. The actual suffix to tack on the end is obtained by looking at the results of a "hostname" call, and using everything starting at the first dot. (See below for a description of how to customize the host name lookup.)

The first argument is the host name you want to look up. If this is a number, an "inverse query" is done, i.e. the domain system looks in a separate set of databases used to convert numbers to names.

The second argument is optional. It allows you to specify a particular server to query. If you don't specify this argument, the default server (normally the local machine) is used.

If a name is specified, you may see output of three different kinds. Here is an example that shows all of them:

```
% host sun4
sun4.rutgers.edu is a nickname for ATHOS.RUTGERS.EDU
ATHOS.RUTGERS.EDU has address 128.6.5.46
ATHOS.RUTGERS.EDU has address 128.6.4.4
ATHOS.RUTGERS.EDU mail is handled by ARAMIS.RUTGERS.EDU
```

The user has typed the command "host sun4". The first line indicates that the name "sun4.rutgers.edu" is actually a nickname. The official host name is "ATHOS.RUTGERS.EDU'. The next two lines show the address. If a system has more than one network interface, there will be a separate address for each. The last line indicates that ATHOS.RUTGERS.EDU does not receive its own mail. Mail for it is taken by ARAMIS.RUTGERS.EDU. There may be more than one such line, since some systems have more than one other system that will handle mail for them. Technically, every system that can receive mail is supposed to have an entry of this kind. If the system receives its own mail, there should be an entry the mentions the system itself, for example "XXX mail is handled by XXX". However many systems that receive their own mail do not bother to mention that fact. If a system has a "mail is handled by" entry, but no address, this indicates that it is not really part of the Internet, but a system that is on the network will forward mail to it. Systems on Usenet, Bitnet, and a number of other networks have entries of this kind.

There are a number of options that can be used before the host name. Most of these options are meaningful only to the staff who have to maintain the domain database.

The option -w causes host to wait forever for a response. Normally it will time out after around a minute.

The option -v causes printout to be in a "verbose" format. This is the official domain master file format, which is documented in the man page for "named". Without this option, output still follows this format in general terms, but some attempt is made to make it more intelligible to normal users. Without -v, "a", "mx", and "cname" records are written out as "has address", "mail is handled by", and "is a nickname for", and TTL and class fields are not shown.

The option -r causes recursion to be turned off in the request. This means that the name server will return only data it has in its own database. It will not ask other servers for more information.

The option -d turns on debugging. Network transactions are shown in detail.

The option -t allows you to specify a particular type of information to be looked up. The arguments are defined in the man page for "named". Currently supported types are a, ns, md, mf, cname, soa, mb, mg, mr, null, wks, ptr, hinfo, minfo, mx, uinfo, uid, gid, unspec, and the wildcard, which may be written as either "any" or "*". Types must be given in lower case. Note that the default is to look first for "a", and then "mx", except that if the verbose option is turned on, the default is only "a".

The option -a (for "all") is equivalent to "-v -t any".

The option -l causes a listing of a complete domain. E.g.
  host -l rutgers.edu
will give a listing of all hosts in the rutgers.edu domain. The -t option is used to filter what information is presented, as you would expect. The default is address information, which also include PTR and NS records. The command
  host -l -v -t any rutgers.edu
will give a complete download of the zone data for rutgers.edu, in the official master file format. (However the SOA record is listed twice, for arcane reasons.) NOTE: -l is implemented by doing a complete zone transfer and then filtering out the information the you have asked for. This command should be used only if it is absolutely necessary.

CUSTOMIZING HOST NAME LOOKUP

In general, if the name supplied by the user does not have any dots in it, a default domain is appended to the end. This domain can be defined in /etc/resolv.conf, but is normally derived by taking the local hostname after its first dot. The user can override this, and specify a different default domain, using the environment variable *LOCALDOMAIN*. In addition, the user can supply his own abbreviations for host names. They should be in a file consisting of one line per abbreviation. Each line contains an abbreviation, a space, and then the full host name. This file must be pointed to by an environment variable *HOSTALIASES*, which is the name of the file.

See Also

named (8)

BUGS

Unexpected effects can happen when you type a name that is not part of the local domain. Please always keep in mind the fact that the local domain name is tacked onto the end of every name, unless it ends in a dot. Only if this fails is the name used unchanged.

The -l option only tries the first name server listed for the domain that you have requested. If this server is dead, you may need to specify a server manually. E.g. to get a listing of foo.edu, you could try "host -t ns foo.edu" to get a list of all the name servers for foo.edu, and then try "host -l foo.edu xxx" for all xxx on the list of name servers, until you find one that works.