NAME

nonamed − not a name daemon, but acts like one

SYNOPSIS

nonamed [**−d**[*level*]] [**−p** *port*] [**−n** *address*[/*port*]]

DESCRIPTION

Nonamed is not an Internet name daemon. When started it immediately tries to find a real name daemon on the local network. If it finds one then it will relay any DNS queries to that name daemon. If it can't find one then it will do its best to answer simple queries using the **/etc/hosts** table for name to address translation.

On startup **nonamed** broadcasts up to five" simple UDP queries on the local network. This is a somewhat nasty thing to do, because it makes all name servers on the net spring into action to answer the request. The first name server to answer is used by **nonamed** to answer the queries of its clients. The broadcast search is repeated after an hour to give another name server a chance to be abused. (It is quite normal for a host to use a remote name server. The broadcasts are a bit unfriendly, but they only happen once an hour.)

If a real name server is found then **nonamed** enters "relay mode", passing all queries on. In relay mode the daemon cannot be distinguished from a real DNS name daemon.

Nonamed accepts both UDP and TCP queries under Minix-vmd. Under standard Minix only UDP queries are accepted. 256" relayed UDP queries can be outstanding before it forgets where the first one came from.

In answer mode **nonamed** can answer simple DNS queries to translate a host name to an IP address, or an IP address to a host name. Suppose **/etc/hosts** looks like this:

```
127.0.0.1       localhost
10.0.0.1        flotsam.cs.vu.nl
10.0.0.2        jetsam.cs.vu.nl
```

Then queries for the host names listed can be answered with the IP addresses to the left of them. If the name can't be found then it is retried with the domain name stripped of, this is because "localhost" is looked up as "localhost.cs.vu.nl" in the above example. Reverse lookups are answered with the first hostname on the line with the IP address.

UDP queries are immediately answered on startup if the answer can be found in the hosts file. Failure answers, and answers to TCP queries are delayed until it decides that there are no real name servers out there.

Nonamed employs several timeouts for efficient operation:

If five" broadcasts, two seconds" apart fail to produce a name server on startup then it decides that there are no real name servers around.

After 1 hour" it will again look for a name server. (We don't want to hog the same one indefinitely.)

If no UDP reply is seen in four seconds" than a simple probe is sent to the name server. If that doesn't provoke an answer in two seconds" then it will look for a new name server. A failing TCP connection will also invoke a search, the TCP connection is then made to the new name server. A client using UDP will retry eventually, a client using TCP will notice nothing but a short delay. The daemon drops back into answer mode if the search fails and it has a hosts file with a "localhost" entry.

It waits five minutes" for any action on a TCP stream before the connection is aborted.

In answer mode it will generate data with a TTL (time to live) of 1 hour".

OPTIONS

The options are only useful when debugging **nonamed**, although it can be very instructive to watch DNS queries being done.

−d[*level*]
: Set debugging level to *level* (a single digit, by default **1**.) Debug mode 1 makes **nonamed** decode and display the DNS queries and replies that it receives, sends and relays. The

decoding only handles the common cases. In debug mode 2 it prints tracing information about the internal jobs it executes. In debug mode 3 it core dumps when an error causes it to exit. The debugging level may also be increased by 1 at runtime by sending signal **SIGUSR1** or turned off (set to 0) with **SIGUSR2**.

[**−p** *port*]
: Port to use instead of the normal **domain** port.

[**−n** *address*[/*port*]]
: Use this IP address and port to find a real name server. It can be used to make **nonamed** relay to another **nonamed**. (They do not listen to broadcasts, of course.) You can run two daemons on one machine if you choose a new port number for one of them. You can force **nonamed** out of relay mode by sending it a hangup signal.

FILES

/etc/hosts Hosts to address translation table when in answer mode.

SEE ALSO

gethostbyname(3), **resolver**(3), **hosts**(5), **netdefault**(8), **boot**(8), **inetd**(8), **irdpd**(8), **rarpd**(8).

NOTES

You can specify a remote name server in **/etc/resolv.conf** to circumvent **nonamed**. But then you lose its talent for automatically finding new name servers when the remote name server becomes unreachable.

Don’t add a "localhost" entry to the hosts file if there are remote name servers. It makes **nonamed** drop back in answer mode on a flaky network.

BUGS

If you can get a remote **nonamed** to listen to your name server then you can make it believe anything you want to. You need access to a machine on the same subnet of course.

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