NAME

nslookup – query name servers interactively

SYNOPSIS

nslookup [–**opt**] [*host* | –] [*server*]

AVAILABILITY

SUNWcsu

DESCRIPTION

nslookup is an interactive program to query ARPA Internet domain name servers. The user can contact servers to request information about a specific host, or print a list of hosts in the domain.

OPTIONS

–**opt** Allows you to set options as in the interactive **set** option shown below. For example –**querytype=HINFO** to ask for host information instead of the default query type of **A** for address information.

host Look up the host *host* directly and do not go into interactive mode.

– Use the name server specified next on the command line instead of the servers in **/etc/resolv.conf**. Note that if both **host** and **server** are specified on the command line this – argument becomes optional.

server Use the name server specified. This can be either a name or an Internet address. If this fails, it will default to using the entries in the **/etc/resolv.conf** file.

USAGE

Overview

The Internet domain name-space is tree-structured, with five top-level domains at present:

COM commercial establishments

EDU educational institutions

ORG not-for-profit organizations

GOV government agencies

MIL MILNET hosts

If you are looking for a specific host, you need to know something about the host's organization in order to determine the top-level domain it belongs to. For instance, if you want to find the Internet address of a machine at UCLA , do the following:

- Connect with the root server using the **root** command. The root server of the name space has knowledge of the top-level domains.
- Since UCLA is a university, its domain name is **ucla.edu**. Connect with a server for the **ucla.edu** domain with the command **server ucla.edu**. The response will print the names of hosts that act as servers for that domain. Note: the root server does not have information about **ucla.edu**, but knows the names and addresses of hosts that do. Once located by the root server, all future queries will be sent to the UCLA name server.

- To request information about a particular host in the domain (for instance, **locus**), just type the host name. To request a listing of hosts in the UCLA domain, use the **ls** command. The **ls** command requires a domain name (in this case, **ucla.edu**) as an argument.

If you are connected with a name server that handles more than one domain, all lookups for host names must be fully specified with its domain. For instance, the domain **harvard.edu** is served by **seismo.css.gov**, which also services the **css.gov** and **cornell.edu** domains. A lookup request for the host **aiken** in the **harvard.edu** domain must be specified as **aiken.harvard.edu**. However, the

set domain = *name*

and

set defname

commands can be used to automatically append a domain name to each request.

After a successful lookup of a host, use the **finger** command to see who is on the system, or to finger a specific person. To get other information about the host, use the

set querytype = *value*

command to change the type of information desired and request another lookup. (**finger** requires the type to be **A**.)

Commands

To exit, type CTRL-D (EOF).

The command line length must be less than 80 characters.

An unrecognized command will be interpreted as a host name.

host [*server*]
: Look up information for *host* using the current default server, or using *server* if it is specified.

server *domain*
lserver *domain*
: Change the default server to *domain*. **lserver** uses the initial server to look up information about *domain* while **server** uses the current default server. If an authoritative answer can not be found, the names of servers that might have the answer are returned.

root
: Change the default server to the server for the root of the domain name space. Currently, the host **ns.nic.ddn.mil** is used; this command is a synonym for **lserver ns.nic.ddn.mil**. The name of the root server can be changed with the **set root** command.

finger [*name*]
: Connect with the finger server on the current host, which is defined by a previous successful lookup for a host's address information (see the **set** *querytype* **= A** command). As with the shell, output can be redirected to a named file using **>** and **>>**.

ls [−**ah**]
List the information available for *domain*. The default output contains host names and their Internet addresses. The −**a** option lists aliases of hosts in the domain. The −**h** option lists CPU and operating system information for the domain. As with the shell, output can be redirected to a named file using **>** and **>>**. When output is directed to a file, hash marks are printed for every 50 records received from the server.

view *filename*
Sort and list the output of the **ls** command with **more**(1).

help
? Print a brief summary of commands.

set *keyword* [= *value*] This command is used to change state information that affects the lookups. Valid keywords are:

all Print the current values of the various options to **set**. Information about the current default server and host is also printed.

[**no**]**deb**[**ug**]
Turn debugging mode on. A lot more information is printed about the packet sent to the server and the resulting answer. The default is **nodebug**.

[**no**]**def**[*name*]
Append the default domain name to every lookup. The default is **nodefname**.

do[**main**]= *filename*
Change the default domain name to *filename*. The default domain name is appended to all lookup requests if **defname** option has been set. The default is the value in **/etc/resolv.conf**.

q[**querytype**] = *value*
Change the type of information returned from a query to one of:

A	The host's Internet address (the default).
CNAME	The canonical name for an alias.
HINFO	The host CPU and operating system type.
MD	The mail destination.
MX	The mail exchanger.
MB	The mailbox domain name.
MG	The mail group member.
MINFO	The mailbox or mail list information.

(Other types specified in the RFC 883 document are valid, but are not very useful.)

[**no**]**recurse**
Tell the name server to query other servers if it does not have the information. The default is **recurse**.

ret[**ry**] = *count*
Set the number of times to retry a request before giving up to *count*. When a reply to a request is not received within a certain amount of time (changed with **set timeout**), the request is resent. The default is *count* is **2**.

ro[**ot**] = *host*
Change the name of the root server to *host*. This affects the **root** command. The default root server is **ns.nic.ddn.mil**.

t[**timeout**] = *interval*
Change the time-out for a reply to *interval* seconds. The default *interval* is **10** seconds.

[**no**]**v**[**c**]
Always use a virtual circuit when sending requests to the server. The default is **novc**.

FILES

/etc/resolv.conf initial domain name and name server addresses

SEE ALSO

nstest(1M), **resolver**(3N), **resolv.conf**(4)

RFC 882, RFC 883

DIAGNOSTICS

If the lookup request was not successful, an error message is printed. Possible errors are:

Time-out The server did not respond to a request after a certain amount of time (changed with **set timeout =** *value*) and a certain number of retries (changed with **set retry =** *value*).

No information Depending on the query type set with the **set querytype** command, no information about the host was available, though the host name is valid.

Non-existent domain
The host or domain name does not exist.

Connection refused
Network is unreachable
The connection to the name or finger server could not be made at the current time. This error commonly occurs with **finger** requests.

Server failure The name server found an internal inconsistency in its database and could not return a valid answer.

Refused The name server refused to service the request.

The following error should not occur and it indicates a bug in the program.

Format error
The name server found that the request packet was not in the proper format.