NAME

nslookup − query Internet name servers interactively

SYNOPSIS

nslookup [−*option ...*] [*host-to-find* | − [*server*]]

DESCRIPTION

Nslookup is a program to query Internet domain name servers. Nslookup has two modes: interactive and non-interactive. Interactive mode allows the user to query name servers for information about various hosts and domains or to print a list of hosts in a domain. Non-interactive mode is used to print just the name and requested information for a host or domain.

ARGUMENTS

Interactive mode is entered in the following cases:

a) when no arguments are given (the default name server will be used),

b) when the first argument is a hyphen (−) and the second argument is the host name or Internet address of a name server.

Non-interactive mode is used when the name or Internet address of the host to be looked up is given as the first argument. The optional second argument specifies the host name or address of a name server.

The options listed under the ‘‘set’’ command below can be specified in the .nslookuprc file in the user's home directory if they are listed one per line. Options can also be specified on the command line if they precede the arguments and are prefixed with a hyphen. For example, to change the default query type to host information, and the initial timeout to 10 seconds, type:

    nslookup −query=hinfo −timeout=10

INTERACTIVE COMMANDS

Commands may be interrupted at any time by typing a control-C. To exit, type a control-D (EOF) or type exit. The command line length must be less than 256 characters. To treat a built-in command as a host name, precede it with an escape character (\). **N.B.** 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 specified. If *host* is an Internet address and the query type is A or PTR, the name of the host is returned. If *host* is a name and does not have a trailing period, the default domain name is appended to the name. (This behavior depends on the state of the **set** options **domain**, **srchlist**, **defname**, and **search**). To look up a host not in the current domain, append a period to the name.

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't be found, the names of servers that might have the answer are returned.

root Changes 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*] [**>** *filename*]
finger [*name*] [**>>** *filename*]

Connects with the finger server on the current host. The current host is defined when a previous lookup for a host was successful and returned address information (see the **set querytype=A** command). *Name* is optional. **>** and **>>** can be used to redirect output in the usual manner.

ls [*option*] *domain* [**>** *filename*]
ls [*option*] *domain* [**>>** *filename*]

List the information available for *domain*, optionally creating or appending to *filename*. The default output contains host names and their Internet addresses. *Option* can be one of the following:

−t *querytype*
lists all records of the specified type (see *querytype* below).

−a lists aliases of hosts in the domain. synonym for **−t CNAME**.

−d lists all records for the domain. synonym for **−t ANY**.

−h lists CPU and operating system information for the domain. synonym for **−t HINFO**.

−s lists well-known services of hosts in the domain. synonym for **−t WKS**.

When output is directed to a file, hash marks are printed for every 50 records received from the server.

view *filename*
Sorts and lists the output of previous **ls** command(s) with *more*(1).

help

? Prints a brief summary of commands.

exit Exits the program.

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

all Prints the current values of the frequently-used options to **set**. Information about the current default server and host is also printed.

class=*value*
Change the query class to one of:

IN	the Internet class.
CHAOS	the Chaos class.
HESIOD	the MIT Athena Hesiod class.
ANY	wildcard (any of the above).

The class specifies the protocol group of the information.
(Default = IN, abbreviation = cl)

[no]debug
Turn debugging mode on. A lot more information is printed about the packet sent to the server and the resulting answer.
(Default = nodebug, abbreviation = [no]deb)

[no]d2 Turn exhaustive debugging mode on. Essentially all fields of every packet are printed.
(Default = nod2)

domain=*name*
Change the default domain name to *name*. The default domain name is appended to a lookup request depending on the state of the **defname** and **search** options. The domain search list contains the parents of the default domain if it has at least two components in

its name. For example, if the default domain is CC.Berkeley.EDU, the search list is CC.Berkeley.EDU and Berkeley.EDU. Use the **set srchlist** command to specify a different list. Use the **set all** command to display the list.
(Default = value from hostname, /etc/resolv.conf or LOCALDOMAIN, abbreviation = do)

srchlist=*name1/name2/...*

Change the default domain name to *name1* and the domain search list to *name1*, *name2*, etc. A maximum of 6 names separated by slashes (/) can be specified. For example,

set srchlist=lcs.MIT.EDU/ai.MIT.EDU/MIT.EDU

sets the domain to lcs.MIT.EDU and the search list to the three names. This command overrides the default domain name and search list of the **set domain** command. Use the **set all** command to display the list.
(Default = value based on hostname, /etc/resolv.conf or LOCALDOMAIN, abbreviation = srchl)

[no]defname

If set, append the default domain name to a single-component lookup request (i.e., one that does not contain a period).
(Default = defname, abbreviation = [no]def)

[no]search

If the lookup request contains at least one period but doesn't end with a trailing period, append the domain names in the domain search list to the request until an answer is received.
(Default = search, abbreviation = [no]sea)

port=*value*

Change the default TCP/UDP name server port to *value*.
(Default = 53, abbreviation = po)

querytype=*value*
type=*value*

Change the type of information query to one of:

A	the host's Internet address.
CNAME	the canonical name for an alias.
HINFO	the host CPU and operating system type.
MINFO	the mailbox or mail list information.
MX	the mail exchanger.
NS	the name server for the named zone.
PTR	the host name if the query is an Internet address, otherwise the pointer to other information.
SOA	the domain's ‘‘start-of-authority’’ information.
TXT	the text information.
UINFO	the user information.
WKS	the supported well-known services.

Other types (ANY, AXFR, MB, MD, MF, NULL) are described in the RFC-1035 document.
(Default = A, abbreviations = q, ty)

[no]recurse
Tell the name server to query other servers if it does not have the information.
(Default = recurse, abbreviation = [no]rec)

retry=*number*
Set the number of retries to *number*. When a reply to a request is not received within a certain amount of time (changed with **set timeout**), the timeout period is doubled and the request is resent. The retry value controls how many times a request is resent before giving up.
(Default = 4, abbreviation = ret)

root=*host*
Change the name of the root server to *host*. This affects the **root** command.
(Default = ns.nic.ddn.mil., abbreviation = ro)

timeout=*number*
Change the initial timeout interval for waiting for a reply to *number* seconds. Each retry doubles the timeout period.
(Default = 5 seconds, abbreviation = ti)

[no]vc Always use a virtual circuit when sending requests to the server.
(Default = novc, abbreviation = [no]v)

[no]ignoretc
Ignore packet truncation errors.
(Default = noignoretc, abbreviation = [no]ig)

DIAGNOSTICS

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

Timed 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 response from server
No name server is running on the server machine.

No records
The server does not have resource records of the current query type for the host, although the host name is valid. The query type is specified with the **set querytype** command.

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 **ls** and **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.

Format error
The name server found that the request packet was not in the proper format. It may indicate an error in *nslookup*.

FILES

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

$HOME/.nslookuprc	user's initial options.
/usr/share/misc/nslookup.help	summary of commands.

ENVIRONMENT

HOSTALIASES	file containing host aliases.
LOCALDOMAIN	overrides default domain.

SEE ALSO

resolver(3), resolver(5), named(8),
RFC-1034 ''Domain Names − Concepts and Facilities''
RFC-1035 ''Domain Names − Implementation and Specification''

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