NSQUERY User's Manual

December, 1991

This manual contains information about the use of NSQUERY, a program for testing Internet domain service (RFC 1035) name servers.

Revision/Update Information: This is a revised manual.

Operating System and Version: VMS V5.0 or later

Software Version: NSQUERY V2.7

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20 December 1991

Preface

This document is intended for users of the NSQUERY program developed at Rensselaer Polytechnic Institute. The reader is expected to be familiar with, or at least have access to, the information about the Internet Domain Naming Service, such as Internet RFC's 1034 and 1035.

System Requirements

NSQUERY requires VMS V5.0 or later and NETLIB V1.2 or later. Refer to the NETLIB release notes for information on supported TCP/IP products.

1 Using NSQUERY

NSQUERY is designed to be invoked as a DCL ‘‘foreign command’’:

```
$ NSQ*UERY :== $disk:[dir]NSQUERY
```

The command description on the following pages describes the qualifiers and parameters available with NSQUERY.

NSQUERY—Issue a Name Service Query

This command issues a query to an Internet domain server and displays the resultant reply.

FORMAT

NSQUERY *query-name [server]*

Command Qualifiers	**Defaults**
/[NO]FLAG	*/FLAG*
/PORT=number	*/PORT=53*
/PROTOCOL=proto	*/PROTOCOL=UDP*
/[NO]RECURSIVE	*/NORECURSIVE*
/TYPE=qtype	*/TYPE=ALL*
/CLASS=qclass	*/CLASS=INTERNET*

PARAMETERS

query-name

Name about which information should be obtained. This should be an internet dotted domain-style name. If *query-name* is a numeric IP address in dotted decimal form (e.g., 128.113.1.5), NSQUERY will automatically make an inverse query by reversing the address segments and adding ‘‘.IN-ADDR.ARPA’’.

server

Server to be queried. If omitted, NSQUERY translates the logical name NSQ_SERVER to obtain the server name. If there is no such logical name or it cannot be translated, NSQUERY prompts for the name of the server. If the server’s name has multiple addresses, all addresses are obtained and each is tried until a query is successfully sent and reply received.

DESCRIPTION

All resource records defined in RFC 1035 are interpreted by NSQUERY. Refer to that RFC for information about the abbreviations used in the resource record display. All ‘‘time-to-live’’ values are displayed as VMS delta-time strings. Authoritative responses and truncated messages are noted before the resource records are displayed.

QUALIFIERS

/[NO]FLAG

Indicates that warnings about process BYTLM and system MAXBUF values being to small should be displayed. NSQUERY will display an informational message if your process’s BYTLM value or the system parameter MAXBUF value is smaller than expected. You can disable this message by specifying /NOFLAG.

/PORT=port

Directs the query to the specified TCP or UDP port. If omitted, port 53 (the port used by most, if not all, domain servers) is used.

/PROTOCOL=proto

Selects either **TCP** or **UDP** protocol. The default is UDP. UDP is generally used for simple domain queries; TCP is generally only used for major domain system events, such as zone transfers.

/[NO]RECURSIVE

Sets the *recursion desired* bit in the query. If the server being queried supports recursion and does not have the requested information cached, it will make queries of other servers on your behalf until the query is answered. NSQUERY will notify you if the server does not support recursive queries.

/TYPE=qtype

Selects the type of resource record to be returned about the name. The default is ALL, which selects all available resource record types. Available types are as follows:

Table 1–1 Resource record types

Type/QType	Description
A	host address
NS	authoritative name server
MD	mail destination (obsolete)
MF	mail forwarder (obsolete)
CNAME	canonical name for an alias
SOA	start of zone authority
MB	mailbox domain name (experimental)
MG	mail group member (experimental)
MR	mail rename domain name (experimental)
NULL	null resource record
WKS	well-known service description
PTR	domain name pointer
HINFO	host information
MINFO	mailbox or mail list information
MX	mail exchange
TXT	text strings
AXFR	complete zone transfer
MAILB	all mailbox-related records (MB, MG, MR)
MAILA	all mail agent records (obsolete)

Refer to RFC 1035 for a complete description of resource record types and their uses. Note that not all servers support all record types. You should probably never attempt to use the AXFR query type.

/CLASS=qclass

Selects the class of resource records to be returned. The default is INTERNET. Available **qclass** values are:

Table 1–2 Resource record classes

Class/QClass	Description
INTERNET	the Internet
CSNET	the CSNET class (obsolete)
CHAOSNET	the CHAOS class
HESIOD	the Hesiod class
ALL	all classes

For more information about resource record class values, see RFC 1035. Note that not all servers support all classes; most servers' authority extends only over Internet-class information.

Example 1–1 Sample NSQUERY output

```
$ NSQUERY RPI.EDU RPI.EDU

%NSQUERY-I-TRYNS, trying address 128.113.1.5...
%NSQUERY-I-AUTHRESP, authoritative response
%NSQUERY-I-QUERYOK, query operation completed successfully

QUERY  #1: QName=RPI.EDU., QType=255, QClass=1

ANSWER #1: RPI.EDU., SOA, INTERNET,    0 12:00:00
    Primary NS: rpi.edu.
    Responsible: hostmaster.rpi.edu.
    Serial=600072, Refresh=   1 06:00:00, Retry=   0 00:20:00
    Expire=  41 16:00:00, Minimum=   0 12:00:00
ANSWER #2: RPI.EDU., A, INTERNET,    0 12:00:00, Addr=128.113.1.5
ANSWER #3: RPI.EDU., NS, INTERNET,    0 12:00:00, NS=rpi.edu.
ANSWER #4: RPI.EDU., NS, INTERNET,    0 12:00:00, NS=netserv2.its.rpi.edu.
ANSWER #5: RPI.EDU., NS, INTERNET,    0 12:00:00, NS=fs3.cs.rpi.edu.
ANSWER #6: RPI.EDU., NS, INTERNET,    0 12:00:00, NS=columbia.edu.
ANSWER #7: RPI.EDU., NS, INTERNET,    0 12:00:00, NS=n2ngw.nyser.net.
ANSWER #8: RPI.EDU., HINFO, INTERNET,    0 12:00:00, CPU=SUN-3/280, OS=UNIX

ADDTNL #1: rpi.edu., A, INTERNET,    0 12:00:00, Addr=128.113.1.5
ADDTNL #2: netserv2.its.rpi.edu., A, INTERNET,    1 00:00:00, Addr=128.113.1.3
ADDTNL #3: fs3.cs.rpi.edu., A, INTERNET,    0 12:00:00, Addr=128.213.4.10
ADDTNL #4: columbia.edu., A, INTERNET,    0 21:27:26, Addr=128.59.16.1
ADDTNL #5: columbia.edu., A, INTERNET,    0 21:27:26, Addr=128.59.32.1
ADDTNL #6: n2ngw.nyser.net., A, INTERNET,    1 22:57:35, Addr=192.35.82.2
ADDTNL #7: n2ngw.nyser.net., A, INTERNET,    0 00:00:56, Addr=128.145.198.2
```