The Named Pool Request Option for DHCP
<draft-ietf-dhc-namedpool-00.txt>

Status of this Memo

[1]. Abstract

   This option is used by a DHCP client to optionally
   identify the specific named pool from which it should be
   assigned an IP address. The information contained in
   this option is an ASCII text object that represents the
   named pool from which the DHCP server assign an IP
   address to the DHCP client.

[2]. Definitions

   Throughout this document, the words that are used to
   define the significance of particular requirements are
   capitalized. These words are:

   o "MUST"

     This word or the adjective "REQUIRED" means that the
     item is an absolute requirement of this specification.

   o "MUST NOT"

     This phrase means that the item is an absolute
     prohibition of this specification.

   o "SHOULD"

     This word or the adjective "RECOMMENDED" means that
     there may exist valid reasons in particular
     circumstances to ignore this item, but the full
     implications should be understood and the case
     carefully weighed before choosing a different course.

   o "SHOULD NOT"

     This phrase means that there may exist valid reasons in
     particular circumstances when the listed behavior is
     acceptable or even useful, but the full implications
     should be understood and the case carefully weighed
     before implementing any behavior described with this
     label.

   o "MAY"

     This word or the adjective "OPTIONAL" means that this
     item is truly optional. One vendor may choose to
     include the item because a particular marketplace
     requires it or because it enhances the product, for
     example; another vendor may omit the same item.

   This document also uses the following terms:

    o "DHCP client"

      A DHCP client or "client" is an Internet host using
     DHCP to obtain configuration parameters such as a
     network address.

   o "DHCP server"

     A DHCP server of "server" is an Internet host that
     returns configuration parameters to DHCP clients.

3. Named Pool Information

   This option is used by a DHCP client to optionally
   identify the specific named pool from which it should be
   assigned an IP address. The information contained in

this option is an ASCII text object that represents the
named pool from which the DHCP server assign an IP
address to the DHCP client.

DHCP administrators MAY assign specific names to IP
address pools on a DHCP server. For example, pools may
be established for various departments or network
segments. A DHCP client MAY then be configured to
request an address from a specific named pool. A DHCP
server SHOULD assign an address from the requested named
pool to the DHCP client.

Servers not equipped to interpret the named pool
specified by a client MUST ignore it. Otherwise, DHCP
servers SHOULD respond with an IP address from the pool
corresponding to the named pool specified by the DHCP
client. If the DHCP server returns no address due to a
named pool's address range being depleted, the DHCP
client MAY resubmit another request with a different
named pool name.

Clients which do not which do not request a named pool
SHOULD be treated in a manner consistent with DHCP server
configuration. A DHCP server MAY be configured to
provide only named pool addresses, in which case a client
requesting an address without using the named pool option
from a DHCP server which supports solely this option MUST
be denied an address. A DHCP server MAY be configured to
automatically rotor to an alternative pool. The DHCP
server MAY then assign an address from this alternative
pool.

The code for this option is TBD. The minimum length for
this option is two.

```
  Code    Len       text1
  +-----+-----+-------------+-----
  | TBD |  N  |  named_pool | ...
  +-----+-----+-------------+-----
```

Security Considerations

Security issues are not discussed in this document.

References

[RFC2131] Droms, R., "Dynamic Host Configuration
Protocol", RFC 2131, March 1997.

   [RFC2132] S. Alexander, R. Droms, "DHCP Options and BOOTP
   Vendor Extensions"

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