Network Working Group   Pratik Gupta, IBM
INTERNET DRAFT   Glenn Stump, IBM
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                   The Domain Search Option for DHCP
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Status of this Memo

1.0 Abstract

   The Dynamic Host Configuration Protocol (DHCP) [1] provides a
   framework for passing configuration information to hosts on a TCP/IP
   network. This document defines a new option which is passed form the
   DHCP server to the DHCP Client to configure the domain search list
   which is used by the clients to resolve hostnames in the Domain Name
   System.

2.0 Introduction

   RFC 2132 allows the Domain Name option (option 15) and the Domain
   Name Server (option 6) to be passed to the DHCP client. These
   options are usually used to configure resolv.conf file on most
   operating systems. This information is used to resolve names in the
   Domain Name System[]. This option allowes a list of domain names in
   the order of preference to be passed to the DHCP client such that the
   search directive can be specified for name resolution.

3.0 Definitions

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

   MUST

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

   MUST NOT

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

   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.

   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 weighted before
        implementing any behavior described with this label.

   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"

        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.

3.0 Domain Search Option Format

   The code for this option is TBD, and its minimum length is 2 bytes.

```
        Code     Len        Priority
         +-------+-------+-------+--------+---------+---------+--
         |  TBD  |   n   |  d1   |   0    |   d2    |    0    |
         +-------+-------+-------+--------+---------+---------+--
```

   where:
         d1 & d2 are domain names

4.0 DHCP Client Behavior

   If a DHCP client is given both a Domain Name Option and a Domain
   Search Option, the Domain Search Option will take precedence.

5.0 Security Considerations

   DHCP currently provides no authentication or security mechanisms.
   Potential exposures to attack are discussed in section 7 of the DHCP
   protocol specification [1].

6.0 References

   [RFC1533] S. Alexander, R. Droms, "DHCP Options and BOOTP Vendor
         Extensions"

   [RFC1541] R. Droms, "Dynamic Host Configuration Protocol"

7.0 Acknowledgments

8.0 Author Information

Pratik Gupta
IBM, Inc.
4205 S.Miami Blvd
Research Triangle Park, NC 27709
Phone: (919)254-5654
email: pratik_gupta@vnet.ibm.com

Glenn Stump
IBM, Inc.
4205 **S.Miami Blvd**
Research Triangle Park, NC 27709
Phone: (919)254-5616
email: glennstump@vnet.ibm.com