

**An Extension to the DHCP Option Codes**  
**<[draft-ietf-dhc-options-opt127-03.txt](#)>**

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Abstract

The Dynamic Host Configuration Protocol (DHCP) provides a framework for passing configuration information to hosts on a TCP/IP network. This document defines a new option to extend the available option codes.

**1. Introduction**

The Dynamic Host Configuration Protocol (DHCP) [[1](#)] provides a framework for passing configuration information to hosts on a TCP/IP network. Configuration parameters and other control information are carried in tagged data items that are stored in the 'options' field of the DHCP message. The data items themselves are also called "options."

Each option is assigned a one-octet option code. Options 128-254 are reserved for local use and at this time over half of the available options in the range 0-127 and option 255 have been assigned. This document defines a new option to extend the available option codes and new option to request the parameters represented by those new

option codes.

## 2. Definition of option 127

Option code 127 indicates that the DHCP option has a two-octet extended option code. The format of these options is:

```

      Extended
Code   Len  option code  Data...
+-----+-----+-----+-----+-----+-----+
| 127 | XXX |  oh |  ol |  d1 |  d2 | ...
+-----+-----+-----+-----+-----+-----+

```

Other than the two-octet extended option code, these options are encoded and carried in DHCP messages identically to the options defined in [RFC 1533](#) [2]. The high-order and low-order octets of the extended option code are stored in 'oh' and 'ol', respectively. The number of octets given in the 'len' field includes the two-octet extended option code.

The two-octet extended option codes will be assigned through the mechanisms defined for the assignment of new options [2] after the current one-octet option codes have been exhausted.

## 3. Definition of option 126

This option is used by a DHCP client to request values for specified configuration parameters that are identified by extended option codes as defined above. The list of  $n$  requested parameters is specified as  $2n$  octets, where each pair of octets is a valid extended option code.

The client MAY list the options in order of preference. The DHCP server is not required to return the options in the requested order, but MUST try to insert the requested options in the order requested by the client.

The code for this option is 126. Its minimum length is 2.

```

      Extended
Code   Len  option codes
+-----+-----+-----+-----+-----+-----+
| 126 | XXX | c1h | c1l | c2h | c2l | ...
+-----+-----+-----+-----+-----+-----+

```



#### **4. References**

- [1] Droms, R., "Dynamic Host Configuration Protocol", [RFC 2131](#), Bucknell University, March 1997.
- [2] Alexander, S. and R. Droms, "DHCP Options and BOOTP Vendor Extensions", [RFC 2132](#), Lachman Associates, March 1997.

#### **5. 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](#)].

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