Requirements for Proposed Changes to the
Dynamic Host Configuration Protocol for IPv4 (DHCPv4)

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Abstract

This memo describes the requirements of Internet-Drafts proposing changes to the Dynamic Host Configuration Protocol for IPv4 (DHCPv4). These requirements specifically cover documentation expected whenever message formats or client state transitions are modified.
1 Introduction

During the lifetime of the Dynamic Host Configuration Protocol (DHCPv4) it has been the subject of 30 Requests for Comments (RFCs) regarding the base protocol (five of which added new DHCPv4 message types or extended the protocol in some way) and 18 RFCs concerning other DHCPv4 options. Seven RFCs covered procedures and definition of base options. Additionally, there are constantly a number of Internet-Drafts under consideration for DHCPv4.

There has been no standard documentation required to date for new Internet-Drafts concerning DHCPv4, even when proposed changes altered message formats, the client state machine, or processing required of servers, relay agents, or clients.

This memo proposes a common-sense minimum standard for documentation required in any new Internet-Draft that will ensure consistency among the various IETF documents and improve the clarity of proposed changes.

2 Use of Key Words

The key words "MUST," "MUST NOT," "REQUIRED," "SHALL," "SHALL NOT," "SHOULD," "SHOULD NOT," "RECOMMENDED," "MAY," and "OPTIONAL" in this document are to be interpreted as described in [RFC2119].

3 Applicability

3.1 Assumptions

This document assumes that the reader is familiar with the base DHCPv4 protocol as defined in [RFC2131].

3.2 Scope of this Memo

This document explicitly restricts itself to DHCPv4, as defined in [RFC2131] and [RFC2132]. The same document change requirements could apply as well to DHCPv6 [RFC3315], although the RFC numbers and document section and page references would be different.

4 Minimum Documentation Requirements

It SHALL be the policy of the Dynamic Host Configuration (DHC) Working Group that new Internet-Drafts concerning DHCPv4 conform to each of the following requirements:

4.1 Description of Message Format Changes

An Internet-Draft that proposes any changes to the DHCPv4 message format MUST fully describe the proposed change, and MUST modify or add entries to the message format figures and message requirements tables as appropriate. These include:

1. RFC 2131, Figure 1, "Format of a DHCP message"
2. RFC 2131, Figure 2, "Format of the ‘flags’ field"
3. RFC 2131, Table 1, "Description of fields in a DHCP message"

4. RFC 2131, Table 2, "DHCP Messages"
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5. RFC 2131, Table 3, "Fields and options used by DHCP servers"

6. RFC 2131, Table 4, "Client messages from different states"

7. RFC 2131, Table 5, "Fields and options used by DHCP clients"

Figures and tables appearing in other, relevant RFCs MUST also be updated as appropriate.

4.2 Description of Client State Machine Changes

An Internet-Draft that proposes changes to the DHCPv4 client state machine MUST supply an updated version of the client state transition diagram (RFC 2131, Figure 5) showing event triggers, states, and client actions. State transition diagrams appearing in other, relevant RFCs MUST also be updated as appropriate.

4.3 Description of Behavior Changes

An Internet-Draft that proposes changes to the behavior of DHCPv4 servers, clients, or relay agents MUST supply an updated description of the modified behavior. For example, see [RFC2131], Sections 4.3 and 4.4, for the description of DHCPv4 server and client behavior, respectively. Relay Agent behavior is described [as "gateway"] in [RFC951].

5 IANA Considerations

None. This memo does not include any numbering requirements requiring IANA activity.

6 Security Considerations

None. This memo does not itself specify behavior or functionality.

7 References

7.1 Normative References


7.2 Informative References


[ RFC2026] Bradner, S., "The Internet Standards Process -- Revision
3, "RFC 2026, BCP 9, October 1996.

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Expires: December 15, 2006


Internet-Draft       DHCPv4 Change Requirements        June 13, 2006

     Host Configuration Protocol (DHCP) Option for the Internet

[ RFC 4243 ] Stapp., M., Johnson, R., and Palaniappan, T., "Vendor-
     Specific Information Suboption for the Dynamic Host

[ RFC 4280 ] Chowdhury, K., Yegani, P., and Madour, L., "Dynamic Host
     Configuration Protocol (DHCP) Options for Broadcast and

     Identifiers for Dynamic Host Configuration Protocol Version Four
     (DHCPv4)," February 2006.


     Network Attachment in IPv4 (DNAv4)," March 2006.

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