Internet Engineering Task Force
INTERNET-DRAFT

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November, 1992

Interoperation Between DHCP and BOOTP

1 Abstract

DHCP provides a superset of the functions provided by BOOTP. This document describes the interactions between DHCP and BOOTP network participants.

2 Status of this memo

This draft document is a product of the IETF Dynamic Host Configuration Working Group; it will be submitted to the RFC editor as a standards document. Distribution of this memo is unlimited. Please respond with comments to the host-conf@sol.cs.bucknell.edu mailing list. This document will expire on June 1, 1993.

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3 Introduction

The Dynamic Host Configuration Protocol (DHCP) provides a mechanism for transmitting configuration parameters to hosts using the TCP/IP protocl suite. The format of DHCP messages is based on the format of BOOTP messages, so that, in certain circumstances, DHCP and BOOTP particpants may exchange messages. This document specifies the ways in which DHCP and BOTP

participants may interoperate.

DHCP introduces a small change in terminology intended to clarify the meaning of one of the fields. What was the ``vendor extensions'' field in BOOTP has been re-named the ``options'' field in DHCP. Similarly, the tagged data items that were used inside the BOOTP ``vendor extensions'' field, which were formerly referred to as ``vendor extensions,'' are now termed simply ``options.'' This document will refer to BOOTP vendor extensions and DHCP options uniformly as ``options.''

Throughout this document, DHCP messages that include a 'DHCP message type' option will be referred to by the type of the message; e.g., a DHCP message with 'DHCP message type' option type1 will be referred to as a ``DHCPDISCOVER'' message.

4 BOOTP clients and DHCP servers

The format of DHCP messages is defined to be compatible with the format of BOOTP messages, so that existing BOOTP clients can interoperate with DHCP servers. Any message received by a DHCP server that includes a 'DHCP message type' (51) option is assumed to have been sent by a DHCP client. Messages without the DHCP Message Type option are assumed to have been sent by a BOOTP client. Support of BOOTP clients by a DHCP server is optional at the discretion of the local system administrator. If a DHCP server that is not configured to support BOOTP clients receives a BOOTREQUEST message from a BOOTP client, that server silently discards the BOOTREQUEST message.

A DHCP server that supports BOOTP clients MUST interact with BOOTP clients according to the BOOTP protocol. The server MUST formulate a BOOTP BOOTREPLY message rather than a DHCP DHCPOFFER message (i.e., the server MUST NOT include the 'DHCP message type' option and MUST NOT exceed the size limit for BOOTREPLY messages). The server marks a binding for a BOOTP client as BOUND after sending the BOOTP BOOTREPLY, as a non-DHCP client will not send a DHCPREQUEST message nor will that client expect a DHCPACK message.

A BOOTP client will not be aware of the DHCP lease mechanism for network address assignment. A DHCP server assigns an infinite lease duration to for network addresses assigned to BOOTP clients. Such network addresses cannot be automatically reassigned by the server. The local system administrator may choose to manually release network addresses assigned to BOOTP clients.

DHCP servers MAY send any DHCP Options to a BOOTP client as allowed by the ``DHCP Options and BOOTP Vendor Extensions'' internet Draft.

5 DHCP clients and BOOTP servers

A DHCP client MAY use a reply from a BOOTP server if the configuration returned from the BOOTP server is acceptable to the DHCP client. A DHCP client MUST assume that an IP address returned in a message from a BOOTP server has an infinite lease. A DHCP client SHOULD choose to use a reply from a DHCP server in preference to a reply from a BOOTP server.

6 Security Considerations

This document does not address security issues.

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8 Expiration date

This document will expire on June 31, 1993.