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Time Protocol Servers Option for IPv6 DHCP draft-droms-dhc-dhcpv6-rfc868-servers-00.txt

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Abstract

The Time Protocol Servers option for IPv6 DHCP ($\underbrace{RFC~3315}$) carries the IPv6 addresses of servers that a host should use for the Time Protocol ($\underbrace{RFC~868}$).

1. Introduction

The Time Protocol [1] can be used to obtain the current time from a server. The Time Protocol Servers option defined in this document provides an option to provide the IPv6 addresses of Time Protocol servers to a host through DHCP [2].

The option defined in this document is based on the IPv4 DHCP [3] Time Server option [4]. This document has no effect on IPv4 DHCP, which will continue to use the Time Server option to provide the IPv4 addresses of RFC 868 Time Protocol servers to clients.

2. Terminology

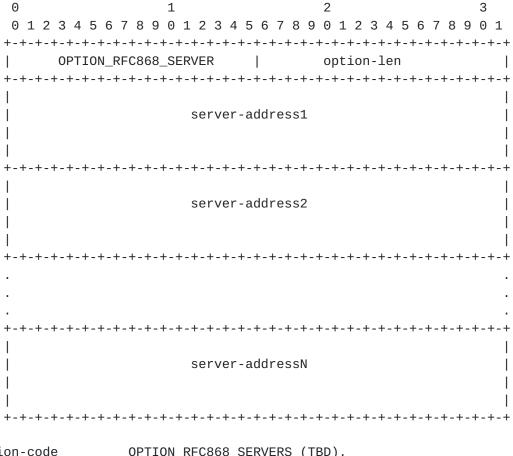
The key words MUST, MUST NOT, REQUIRED, SHALL, SHALL NOT, SHOULD, SHOULD NOT, RECOMMENDED, MAY, and OPTIONAL in this document are to be interpreted as described in $\overline{RFC2119}$ [5].

Throughout this document, unless indicated otherwise for clarity, the acronym "DHCP" refers to "Dynamic Host Configuration Protocol for IPv6" [2].

3. Format of the Time Protocol Servers option

The Time Protocol Servers option defines a list of Time Protocol servers available to the DHCP client. The IPv6 address of each server is included in the option. The addresses SHOULD be listed in order of preference. The addresses MUST be unicast or anycast addresses.

The Time Protocol Servers option has the following format:



option-code OPTION_RFC868_SERVERS (TBD).

16 * N. option-len

server-address1-N The IPv6 addresses of the Time Protocol servers.

4. Security Considerations

A server could use this option to return invalid or incorrect addresses or valid addresses of malicious Time Protocol servers to the client.

Authentication of DHCP messages [2] can be used to ensure that the contents of this option are not altered in transit between the DHCP server and client.

5. IANA Considerations

IANA is requested to assign an option code from the IPv6 DHCP options registry to OPTION_RFC868_SERVER.

6. Normative References

- [1] Postel, J. and K. Harrenstien, "Time Protocol", STD 26, RFC 868, May 1983.
- [2] Droms, R., Bound, J., Volz, B., Lemon, T., Perkins, C., and M. Carney, "Dynamic Host Configuration Protocol for IPv6 (DHCPv6)", <u>RFC 3315</u>, July 2003.
- [3] Droms, R., "Dynamic Host Configuration Protocol", <u>RFC 2131</u>, March 1997.
- [4] Alexander, S. and R. Droms, "DHCP Options and BOOTP Vendor Extensions", <u>RFC 2132</u>, March 1997.
- [5] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", <u>BCP 14</u>, <u>RFC 2119</u>, March 1997.

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