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NIS Configuration Options for DHCPv6
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Abstract

This document describes four options for NIS-related configuration information in DHCPv6: NIS Servers, NIS+ Servers, NIS Client Domain Name, NIS+ Client Domain name.

1. Introduction

This document describes four options for configuration information related to Network Information Service (NIS) in DHCPv6 [[1](#)].

2. Requirements

The keywords MUST, MUST NOT, REQUIRED, SHALL, SHALL NOT, SHOULD, SHOULD NOT, RECOMMENDED, MAY, and OPTIONAL, when they appear in this document, are to be interpreted as described in [RFC 2119](#) [[2](#)]

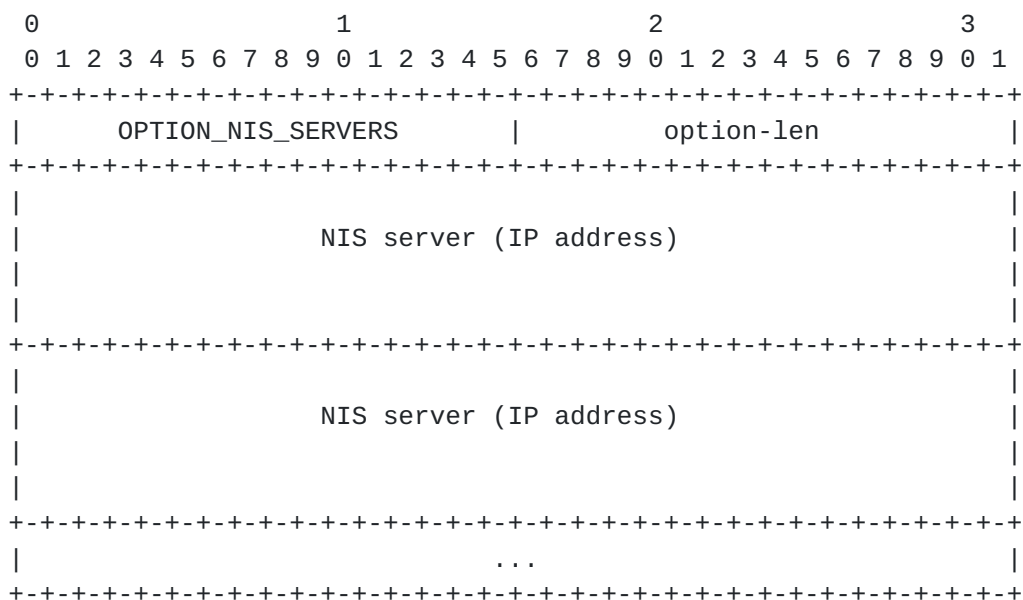
3. Terminology

This document uses terminology specific to IPv6 and DHCPv6 as defined in section "Terminology" of the DHCP specification.

4. Network Information Service (NIS) Servers option

The Network Information Service Servers option provides a list of one or more IP addresses of NIS servers available to the client. The NIS servers SHOULD be listed in the order of preference.

The format of the Network Information Service Servers option is as shown below:



option-code: OPTION_NIS_SERVERS (tbd)

option-len: Length of the 'NIS server' fields in octets; It must be a multiple of 16

NIS server: IP address of NIS server

5. Network Information Service V2 (NIS+) Servers option

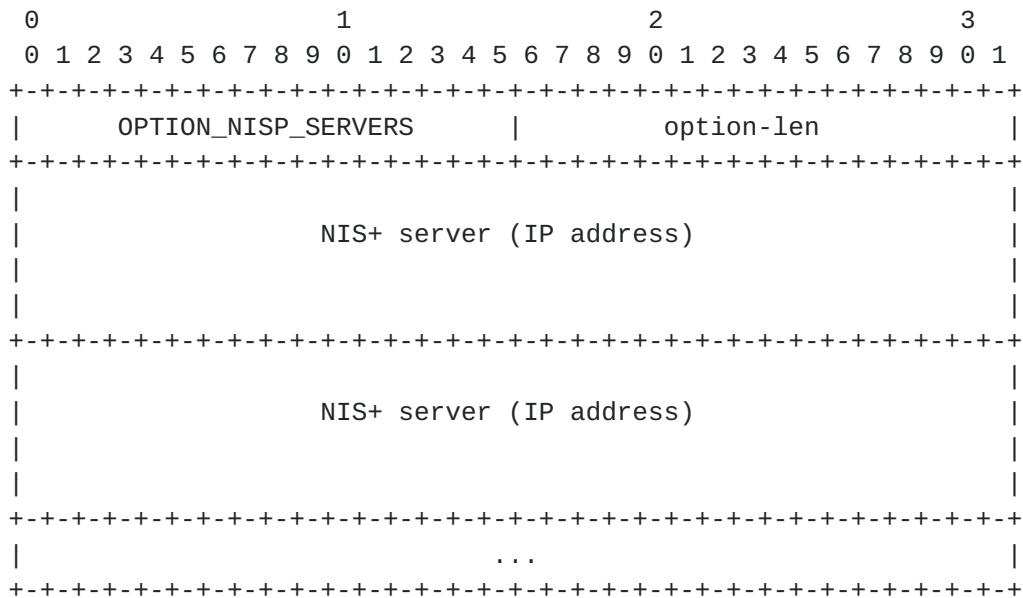
The Network Information Service V2 (NIS+) Servers option provides a list of one or more IP addresses of NIS+ servers available to the client. The NIS+ servers SHOULD be listed in the order of preference.

The format of the Network Information Service V2 (NIS+) Servers option is as shown below:

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option-code: OPTION_NISP_SERVERS (tbd)

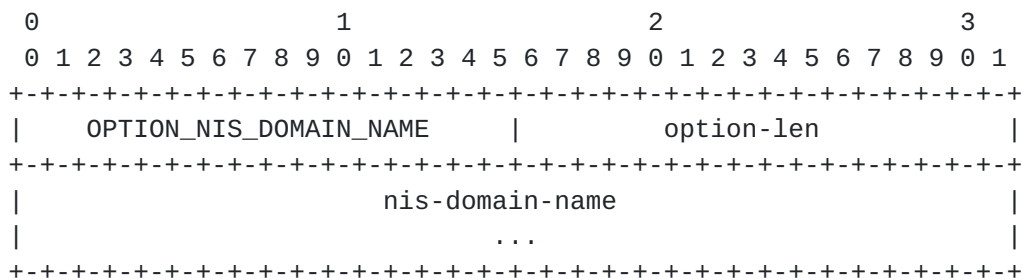
option-len: Length of the 'NIS+ server' fields in octets; It must be a multiple of 16

NIS+ server: IP address of NIS+ server

6. Network Information Service (NIS) Domain Name option

The Network Information Service (NIS) Domain Name option is used by the server to convey client's NIS Domain Name info to the client.

The format of the NIS Domain Name option is as shown below:



option-code: OPTION_NIS_DOMAIN_NAME (tbd)

option-len: Length of the 'nis-domain-name' field in octets

nis-domain-name: NIS Domain name for client

The 'nis-domain-name' MUST be encoded as specified in section "Representation and Use of domain names" of the DHCPv6 specification [[1](#)].

7. Network Information Service V2 (NIS+) Domain Name option

The Network Information Service V2 (NIS+) Domain Name option is used by the server to convey client's NIS+ Domain Name info to the client.

The format of the NIS+ Domain Name option is as shown below:

```

      0               1               2               3
      0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|  OPTION_NISP_DOMAIN_NAME  |  option-len  |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|                               nisp-domain-name                               |
|                               ...                               |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+

```

option-code: OPTION_NISP_DOMAIN_NAME (tbd)

option-len: Length of the 'nisp-domain-name' field in octets

nisp-domain-name: NIS+ Domain name for client

The 'nisp-domain-name' MUST be encoded as specified in section "Representation and Use of domain names" of the DHCPv6 specification [\[1\]](#).

8. Appearance of these option

The NIS servers, NIS+ servers, NIS domain name and NIS+ domain name options MUST appear only in the following messages: Solicit, Advertise, Request, Confirm, Renew, Rebind, Information-Request and Reply.

The option number for these options MAY appear in the Option Request Option [\[1\]](#) in the following messages: Solicit, Request, Confirm, Renew, Rebind, Information-Request and Reconfigure.

9. Security Considerations

The NIS servers, NIS+ servers, NIS domain name and NIS+ domain name options may be used by an intruder DHCP server to assign invalid NIS parameters, resulting in clients unable to use NIS.

To avoid attacks through these options, the DHCP client SHOULD use authenticated DHCP (see section "Authentication of DHCP messages" in the DHCPv6 specification [\[1\]](#)).

10. IANA Considerations

IANA is requested to assign an option code to these options from the option-code space defined in section "DHCPv6 Options" of the DHCPv6 specification [[1](#)].

11. Normative References

- [1] Bound, J., Carney, M., Perkins, C., Lemon, T., Volz, B. and R. Droms (ed.), "Dynamic Host Configuration Protocol for IPv6 (DHCPv6)", [draft-ietf-dhc-dhcpv6-28](#) (work in progress), November 2002.

12. Informative References

- [2] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

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