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KDC Server Address Sub-option
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Abstract

This document defines a new sub-option for the CableLabs Client Configuration (CCC) DHCP option code for conveying the network addresses of Key Distribution Center (KDC) servers.

1. Introduction

The need for a CCC DHCP Option code is described in [1]. The CCC DHCP option code will be used to address specific needs of CableLabs client devices during their configuration processes. This document proposes a sub-option for the CCC DHCP option.

Configuration of a class of CableLabs client devices described in [2] requires a DHCP sub-option to provide the client with the network address of a KDC server in the cable operator's data network. The class of devices assumed in [2] is unlike the class of devices considered in [1], which perform a DNS lookup of the Kerberos Realm name to find the KDC server network address.

This document proposes a sub-option of the CCC DHCP option code for use with CableLabs client devices. The proposed sub-option encodes an identifier for the network address of each of one or more Key Distribution Center servers with which the CableLabs client device exchanges security information.

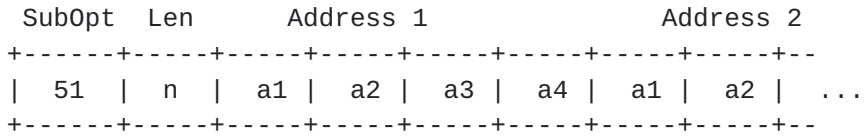
CableLabs plans to assign sub-option code ranges for the CCC option according to CableLabs projects. The range (51 - 100) is assigned to the CableHome project. Use of the initial value of this range is specified in [2].

The key words "MUST", "MUST NOT", "SHOULD", "SHOULD NOT" and "MAY" in this document are to be interpreted as described in RFC 2119 [3].

2. Key Distribution Center IP Address Sub-option

The CableHome 1.0 specification [2] specifies the Key Distribution Center network address encoding as a sub-option of the CCC DHCP Option code. This field is used to inform the client device of the network address of one or more Key Distribution Center servers.

The encoding of the KDC Server Address sub-option will adhere to the format of an IPv4 address using the default port. The minimum length for this option is 4 octets, and the length MUST always be a multiple of 4. If multiple KDC Servers are listed, they MUST be listed in decreasing order of priority. The format of the KDC Server Address sub-option of the CCC option code is as shown below:



3. Security Considerations

This document relies upon the DHCP protocol [4] for authentication

and security, i.e., it does not provide security in excess of what DHCP is (or will be) providing. It does not expose any security threats beyond what is currently exposed by other DHCP options.

4. IANA Considerations

The KDC Server Address sub-option described in this document is intended to be a sub-option of the CableLabs Client Configuration (CCC) option described in [1]. IANA will be requested to register sub-option code 51 of the CCC option to the KDC Server Address sub-option.

5. Normative References

[1] "DHCP Option for CableLabs Client Configuration draft-ietf-dhc-packetcable-05", IETF, December 2002.

[2] "CableHome 1.0 Specification SP-CH1.0-I02-020920", CableLabs, September 2002, http://www.cablelabs.com/projects/cablehome/specifications/.

[3] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

[4] Droms, R., "Dynamic Host Configuration Protocol", RFC 2131, March 1997.

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