Abstract

The DHCP [1] mechanism for identifying the client as a unique entity is the DHCP client-identifier option (code 61) [2]. This draft defines for Option 61 a specific type and type number of a client-identifier based on generated UUIDs [3]. These identifiers are guaranteed to be, or are very, very likely to be unique across time and all clients.

1.0 Introduction

DHCP Option 61 defines a client identifier that is expected to be unique within the network environment in which the client machine resides. It is the responsibility of the vendor or the system administrator to install/use identifiers that meet this requirement.

It would be useful to have available the means to generate client identifiers that are unique regardless of where the client is installed. This would, for instance, allow client machine manufacturers to pre-install the client identifier with a very high degree of confidence that the identifier will be unique.
2.0 Proposed change to DHCP Vendor Option 61

Client-identifier

DHCP clients use this option to specify their unique identifier. This value is expected to be unique for all clients in an administrative domain.

DHCP servers use this value to index their database of address bindings. DHCP servers SHOULD treat identifiers as opaque objects.

For correct identification of clients, each client’s client-identifier MUST be unique among the client-identifiers used on the subnet to which the client is attached, and SHOULD be unique across all domains. Vendors and system administrators are responsible for choosing client-identifiers that meet this requirement for uniqueness.

The client identifier MAY be one of several types defined here:

The client identifier MAY be a UUID (Universal Unique ID). In this case, the Type field MUST be 254 and the length field MUST be 18. The format and content of the UUID MUST be as specified in the RPC Specification from the Open Group [3]

The client identifier MAY consist of type-value pairs similar to the ‘htype’/’chaddr’ fields defined in [3]. For instance, it MAY consist of a hardware type and hardware address. In this case the type field SHOULD be one of the ARP hardware types defined in STD2 [22].

A hardware type of 0 (zero) SHOULD be used when the value field contains an identifier other than a UUID or hardware address (e.g. a fully qualified domain name).

The code for this option is 61, and its minimum length is 2.

<table>
<thead>
<tr>
<th>Code</th>
<th>Len</th>
<th>Type</th>
<th>Client-Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>n</td>
<td>t1</td>
<td>i1 i2 ...</td>
</tr>
</tbody>
</table>
4.0 References


DCE 1.1: Remote Procedure Call
Document Number: C706
Universal Unique Identifier Appendix
Copyright (c) 1997 The Open Group
http://www.opengroup.org/onlinepubs/9629399/toc.htm

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