

**DHCP Options for Call Control Servers**  
<[draft-ietf-dhc-callcontrolserv-00.txt](#)>

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This document is a submission to the Dynamic Host Configuration Working Group of the Internet Engineering Task Force (IETF). Comments should be submitted to the [dhcp-v4@bucknell.edu](mailto:dhcp-v4@bucknell.edu) mailing list.

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Abstract

This document defines a new DHCP option for delivering configuration information to telephony enabled hosts in order to locate a call control/signalling server. The option carries several operational parameters that allow multiple call control vendors to utilize this field.

**1. Introduction**

Telephony is emerging as a network-based application. The Call Control Server option allows telephony or gateway devices which cannot independently setup up and signal calls to automatically discover an address of a call control server.

This specification describes a DHCP option [[1](#)] that can carry one or several Call Control Server sub-options. Each sub-option is treated as a separate potential call control server by the hosts.

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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 [RFC 2119](#). [2]

## 2. Call Control Server Option

This option specifies one or more fields carrying Call Control Server information. The fields that can be carried by this option are described in the sections that follow.

The code for this option is TBD, and its maximum length is 255 octets.

Code	Len	Sub-Option 1				Sub-Option 2				
TBD	n	a1	a2	a3	a4	a1	a2	a3	a4	...

The 'Len' field specifies the number of octets containing sub-option information within the DHCP option.

Each sub-option will contain a code followed by a length that specifies the number of octets containing configuration parameter information within the sub-option.

Sub Code	Sub Len	Configuration Parameter(s)						
x	n	a1	a2	a3	a4	a6	a7	...

### 2.1. Call Control Servers

This section describes the vendor-specific sub-options.

Other types/vendors of call control servers can be added by using new sub-option fields. See [section 2.2](#) for the procedure for adding sub-option fields.

#### 2.1.1 NBX Call Control Server Sub-option

This sub-option specifies the network address of an NBX Call Control Server.

The code for this sub-option is 1. The length specified in the 'Len' field of this sub-option MUST always be 4 octets.

Code	Len	NBX Server Address			
1	4	a1	a2	a3	a4

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**2.1.2 3Com Call Control Server**

This sub-option specifies the network address of a 3Com Call Control Server.

The code for this sub-option is 2. The length specified in the 'Len' field of this sub-option MUST always be 4 octets.

Code	Len	3Com Server Address			
2	4	a1	a2	a3	a4

**2.1.3 MEGACO MGC**

This sub-option specifies the network address of a MEGACO Media Gateway Controller.

The code for this sub-option is 3. The length specified in the 'Len' field of this sub-option MUST always be 4 octets.

Code	Len	MEGACO MGC Address			
3	4	a1	a2	a3	a4

**2.2 Procedure for adding call control server types**

A vendor may add a new sub-option field by issuing an internet draft that contains the new sub-option. The new sub-option field code MUST be labeled "TBD." This draft will then be submitted to the DHC working group, and, if accepted for inclusion in the DHCP specification, a sub-option field code is assigned and the sub-option specification is published as an RFC which updates this RFC.

**3. Using Multiple Sub-options**

More than one sub-option field MAY be returned to the host. In addition, more than one of any sub-option type MAY be present. This allows the host to select the call control server appropriate to own its signaling protocol, allowing a single DHCP server to support multiple homogeneous call control servers as well as heterogeneous telephony and gateway devices.

**4. References**

[1] Alexander, S. and R. Droms, "DHCP Options and BOOTP Vendor Extensions", [RFC-2132](#), March 1997.

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

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[3] Droms, R., "Dynamic Host Configuration Protocol", [RFC-2131](#),  
March 1997.

## 5. Security Considerations

DHCP currently provides no authentication or security mechanisms. Potential exposures to attack are discussed in [section 7](#) of the DHCP protocol specification [3]. In particular, these DHCP options allow an unauthorized DHCP server to misdirect a telephone or gateway host to an unauthorized call control server.

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