

Time Protocol Servers and Time Offset options for DHCPv6

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Background

- Both options based on DHCPv4 options (RFC 2132):
 - Time Server Option (option code 4): “a list of RFC 868 time servers”
 - Time Offset (option code 2): “offset of the client's subnet in seconds from Coordinated Universal Time (UTC)”
- Both requested by CableLabs for DOCSIS 3.0 specification

Time Servers option

- Returns list of available RFC 868 Time Protocol servers to client
 - Listed in preference order
 - Must be unicast or anycast
- Format:

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	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
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+																							
OPTION_RFC868_SERVER												16 * number-of-servers											
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+																							
												server-address1											
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												.											

Time Offset option

- Specifies the offset in seconds from Coordinated Universal Time (UTC) that the client should use to determine its local time
 - 32 bit signed integer for positive and negative offset
 - assumes DHCP server has knowledge of client offset or location

Time Offset option Format

- Format:

