

BOOTP / DHCP options

RFC Sourcebook

[Description](#)[Glossary](#)[RFCs](#)[Publications](#)[Obsolete RFCs](#)**Description:**

Base protocols: [BOOTP](#), Bootstrap Protocol.

[DHCP](#), Dynamic Host Configuration Protocol.

Links: [IANA: BOOTP and DHCP options](#).

DHCP options have the same format as the BOOTP 'vendor extensions'. Options may be fixed length or variable length. All options begin with a tag byte, which uniquely identifies the option. Fixed length options without data consist of only a tag byte. The value of the length byte does not include the tag and length fields.

Options containing NVT ASCII data SHOULD NOT include a trailing NULL. The receiver of such options MUST be prepared to delete trailing NULLs if they exist. The receiver MUST NOT require that a trailing NULL be included in the data. In the case of some variable length options, the length field is a constant but must still be specified.

Code	Data length	Description	References
0	0	Pad .	RFC 2132
1	4	Subnet Mask .	RFC 2132
2	4	Time Offset (deprecated).	RFC 2132
3	4+	Router .	RFC 2132
4	4+	Time Server .	RFC 2132
5	4+	Name Server .	RFC 2132
6	4+	Domain Name Server .	RFC 2132
7	4+	Log Server .	RFC 2132
8	4+	Quote Server .	RFC 2132
9	4+	LPR Server .	RFC 2132
10	4+	Impress Server .	RFC 2132
11	4+	Resource Location Server .	RFC 2132
12	1+	Host Name .	RFC 2132
13	2	Boot File Size .	RFC 2132
14	1+	Merit Dump File .	RFC 2132
15	1+	Domain Name .	RFC 2132
16	4	Swap Server .	RFC 2132
17	1+	Root Path .	RFC 2132
18	1+	Extensions Path .	RFC 2132
19	1	IP Forwarding enable/disable .	RFC 2132
20	1	Non-local Source Routing enable/disable .	RFC 2132
21	8+	Policy Filter .	RFC 2132
22	2	Maximum Datagram Reassembly Size .	RFC 2132
23	1	Default IP Time-to-live .	RFC 2132
24	4	Path MTU Aging Timeout .	RFC 2132
25	2+	Path MTU Plateau Table .	RFC 2132
26	2	Interface MTU .	RFC 2132
27	1	All Subnets are Local .	RFC 2132
28	4	Broadcast Address .	RFC 2132
29	1	Perform Mask Discovery .	RFC 2132
30	1	Mask supplier .	RFC 2132
31	1	Perform router discovery .	RFC 2132
32	4	Router solicitation address .	RFC 2132
33	8+	Static routing table .	RFC 2132
34	1	Trailer encapsulation .	RFC 2132
35	4	ARP cache timeout .	RFC 2132
36	1	Ethernet encapsulation .	RFC 2132

37	1	Default TCP TTL.	RFC 2132
38	4	TCP keepalive interval.	RFC 2132
39	1	TCP keepalive garbage.	RFC 2132
40	1+	Network Information Service Domain.	RFC 2132
41	4+	Network Information Servers.	RFC 2132
42	4+	NTP servers.	RFC 2132
43	1+	Vendor specific information.	RFC 1533 , RFC 2132
44	4+	NetBIOS over TCP/IP name server.	RFC 1533 , RFC 2132
45	4+	NetBIOS over TCP/IP Datagram Distribution Server.	RFC 1533 , RFC 2132
46	1	NetBIOS over TCP/IP Node Type.	RFC 1533 , RFC 2132
47	1+	NetBIOS over TCP/IP Scope.	RFC 1533 , RFC 2132
48	4+	X Window System Font Server.	RFC 1533 , RFC 2132
49	4+	X Window System Display Manager.	RFC 1533 , RFC 2132
50	4	Requested IP Address.	RFC 1533 , RFC 2132
51	4	IP address lease time.	RFC 1533 , RFC 2132
52	1	Option overload.	RFC 1533 , RFC 2132
53	1	DHCP message type.	RFC 1533 , RFC 2132 , RFC 3203 , RFC 4388
54	4	Server identifier.	RFC 1533 , RFC 2132
55	1+	Parameter request list.	RFC 1533 , RFC 2132
56	1+	Message.	RFC 1533 , RFC 2132
57	2	Maximum DHCP message size.	RFC 1533 , RFC 2132
58	4	Renew time value.	RFC 1533 , RFC 2132
59	4	Rebinding time value.	RFC 1533 , RFC 2132
60	1+	Class-identifier.	RFC 1533 , RFC 2132
61	2+	Client-identifier.	RFC 1533 , RFC 2132 , RFC 4361
62	1 to 255	NetWare/IP Domain Name.	RFC 2242
63		NetWare/IP information.	RFC 2242
64	1+	Network Information Service+ Domain.	RFC 2132
65	4+	Network Information Service+ Servers.	RFC 2132
66	1+	TFTP server name.	RFC 2132
67	1+	Bootfile name.	RFC 2132
68	0+	Mobile IP Home Agent.	RFC 2132
69	4+	Simple Mail Transport Protocol Server.	RFC 2132
70	4+	Post Office Protocol Server.	RFC 2132
71	4+	Network News Transport Protocol Server.	RFC 2132
72	4+	Default World Wide Web Server.	RFC 2132
73	4+	Default Finger Server.	RFC 2132
74	4+	Default Internet Relay Chat Server.	RFC 2132
75	4+	StreetTalk Server.	RFC 2132
76	4+	StreetTalk Directory Assistance Server.	RFC 2132
77	Variable.	User Class Information.	RFC 3004
78	Variable.	SLP Directory Agent.	RFC 2610
79	Variable.	SLP Service Scope.	RFC 2610
80	0	Rapid Commit.	RFC 4039
81	4+.	FQDN, Fully Qualified Domain Name.	RFC 4702
82	Variable.	Relay Agent Information.	RFC 3046 , RFC 5010
83	14+	Internet Storage Name Service.	RFC 4174
84			RFC 3679
85	Variable.	NDS servers.	RFC 2241
86	Variable.	NDS tree name.	RFC 2241
87	Variable.	NDS context.	RFC 2241
88	Variable.	BCMCS Controller Domain Name list.	RFC 4280
89	4+	BCMCS Controller IPv4 address list.	RFC 4280
90	Variable.	Authentication.	RFC 3118
91	4	client-last-transaction-time.	RFC 4388
92	4n	associated-ip.	RFC 4388

93	Variable.	Client System Architecture Type.	RFC 4578
94	Variable.	Client Network Interface Identifier.	RFC 4578
95	Variable.	LDAP, Lightweight Directory Access Protocol.	RFC 3679
96			RFC 3679
97	Variable.	Client Machine Identifier.	RFC 4578
98		Open Group's User Authentication.	RFC 2485
99		GEOCONF_CIVIC.	RFC 4776
100		IEEE 1003.1 TZ String.	RFC 4833
101		Reference to the TZ Database.	RFC 4833
102 - 111			RFC 3679
112	Variable.	NetInfo Parent Server Address.	RFC 3679
113	Variable.	NetInfo Parent Server Tag.	RFC 3679
114	Variable.	URL.	RFC 3679
115			RFC 3679
116	1	Auto-Configure	RFC 2563
117	2+	Name Service Search.	RFC 2937
118	4	Subnet Selection.	RFC 3011
119	Variable	DNS domain search list.	RFC 3397
120	Variable	SIP Servers DHCP Option.	RFC 3361
121	5+	Classless Static Route Option.	RFC 3442
122	Variable	CCC, CableLabs Client Configuration.	RFC 3495 , RFC 3594 , RFC 3634
123	16	GeoConf .	RFC 3825
124		Vendor-Identifying Vendor Class.	RFC 3925
125		Vendor-Identifying Vendor-Specific.	RFC 3925
126			RFC 3679
127			RFC 3679
128		TFTP Server IP address.	RFC 4578
129		Call Server IP address.	RFC 4578
130		Discrimination string.	RFC 4578
131		Remote statistics server IP address.	RFC 4578
132		802.1P VLAN ID.	RFC 4578
133		802.1Q L2 Priority.	RFC 4578
134		Diffserv Code Point.	RFC 4578
135		HTTP Proxy for phone-specific applications.	RFC 4578
136	4+	PANA Authentication Agent.	RFC 5192
137	variable	LoST Server.	RFC 5223
138		CAPWAP Access Controller addresses.	RFC 5417
139		OPTION-IPv4_Address-MoS.	RFC 5678
140		OPTION-IPv4_FQDN-MoS.	RFC 5678
141	2+	SIP UA Configuration Service Domains.	RFC 6011
142		OPTION-IPv4_Address-ANDSF.	RFC 6153
143		OPTION-IPv6_Address-ANDSF.	RFC 6153
144 - 149			RFC 3942
150		TFTP server address.	RFC 5859
150		Etherboot. GRUB configuration path name.	
151		status-code.	
152		base-time.	
153		start-time-of-state.	
154		query-start-time.	
155		query-end-time.	
156		dhcp-state.	

157		data-source.	
158 - 174			RFC 3942
175		Etherboot.	
176		IP Telephone.	
177		Etherboot. PacketCable and CableHome.	
178 - 207			RFC 3942
208		pxelinux.magic (string) = F1:00:74:7E (241.0.116.126).	RFC 5071
209		pxelinux.configfile (text).	RFC 5071
210		pxelinux.pathprefix (text).	RFC 5071
211		pxelinux.reboottime (unsigned integer 32 bits).	RFC 5071
212	18+	OPTION_6RD.	RFC 5969
213		OPTION_V4_ACCESS_DOMAIN.	RFC 5986
214 - 219			
220		Subnet Allocation.	
221	1+	Virtual Subnet Selection.	RFC 6607
222 223			RFC 3942
224 - 254		Private use.	
255	0	End.	RFC 2132

Glossary:

RFCs:

[RFC 2132] DHCP Options and BOOTP Vendor Extensions.

- Category: Standards Track.
- Updated by:
[RFC 3942](#), [RFC 4361](#).
- Obsoletes:
[RFC 1533](#).

[RFC 5417] Control And Provisioning of Wireless Access Points (CAPWAP) Access Controller DHCP Option.

- Category: Standards Track.
- Defines DHCP option 138 (CAPWAP Access Controller addresses).
- Defines DHCPv6 option 52 (CAPWAP Access Controller addresses).

[RFC 6011] Session Initiation Protocol (SIP) User Agent Configuration.

- Category: Informational.
- Defines DHCP option 141 (SIP UA Configuration Service Domains).
- Defines DHCPv6 option 58 (OPTION_SIP_UA_CS_LIST).

[RFC 6607] Virtual Subnet Selection Options for DHCPv4 and DHCPv6.

- Category: Standards Track.
- Defines DHCP option 221 (Virtual Subnet Selection).
- Defines DHCP option 82 suboption 151 (DHCPv4 Virtual Subnet Selection).
- Defines DHCP option 82 suboption 152 (DHCPv4 Virtual Subnet Selection Control).
- Defines DHCPv6 option 68 (Virtual Subnet Selection).
- Updates:
[RFC 3046](#).

Publications:

Obsolete RFCs:

[[RFC 2489](#)] Procedure for Defining New DHCP Options.

- BCP: 29.
- Obsoleted by:
[RFC 2939](#).

RFC Sourcebook	Description	Glossary	RFCs	Publications	Obsolete RFCs
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