

USGv6 Test Selection Tables

DHCPv6 Client Requirements

F4-Conformance: DHCPv6 Client Requirements R1v1.0

Applicable Profile: NIST SP 500-267B Revision 1 USGv6 Profile – November 2020.

Test Specification Id:

- [[DHCPv6-Conf](#)] IPv6 Ready DHCPv6 Client Test Specification, [editor: [IPv6 Ready Logo](#)].

IA Requirements:

- The Client must utilize IA_NA options when executing test case steps.

DHCPv6 Client Test Check List			
Reference	Test Specification Id	Test Number	Device Type
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.1.1: Implementation of DHCP constants (A) (B)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.1.2: Client Message Format	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.1.3: Client Identifier Option Format	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.1.4: Client DHCP Unique Identifier Contents (A)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.1.5: Server Identifier Option Format	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.1.6: Elapsed Time Option Format (A) (B) (C) (D) (E) (F)	Client
RFC 8415 RFC 3646	DHCPv6-Conf	DHCP_Conf.1.1.7: Option Request Option Format (A) (B) (C) (D)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.1.8: Singleton Options (A) (B) (C) (D) (E)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.2.1: Transmission of Solicit Messages (A) (B) (C) (D) <i>Note: The Client may include T1/T2 and valid/preferred lifetime fields with the value 0</i>	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.2.2: Message Exchange Termination for Solicit messages (A) (B) (C)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.2.3: Transmission of Request messages (A) (B) (C) (D) <i>Note: The Client may include T1/T2 and valid/preferred lifetime fields with the value 0</i>	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.2.4: Transmission of Renew messages (A) (B) (C) (D) (E) <i>Note: The Client may include T1/T2 and valid/preferred lifetime fields with the value 0</i>	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.2.5: Transmission of Rebind messages (A) (B) (C) (D) <i>Note: The Client may include T1/T2 and valid/preferred lifetime fields with the value 0</i>	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.3.1: Reception of Reply messages (A) (B) (C) (D) (E) (F) (G)	Client

RFC 8415	DHCPv6-Conf	DHCP_Conf.1.3.2: Processing SOL_MAX_RT Option (A) (B) (C) (D)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.3.3: Reception of Advertise messages (A) (B)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.3.4: Reception of Invalid Advertise message (A) (B) (C) (D) (E)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.3.5: Reception of Invalid Reply message (A) (B) (C) (D)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.3.6: Client Message Validation (A) (B) (C) (D) (E) (F) (G) (H) (I) (J)	Client
RFC 3646	DHCPv6-Conf	DHCP_Conf.1.3.7: Reception of Reply messages for DNS Configuration options (A) (B)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.3.8: T1/T2 Time of Zero (A) (B)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.3.9: Unknown Types (A) (B)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.1.3.10: Multiple Servers (C)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.1: Basic Message Exchange – IA_NA (A) (C) (D) (F)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.2: IA_NA Option Format <i>Note: The Client may include T1/T2 and valid/preferred lifetime fields with the value 0</i>	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.3: Identity Association Consistency	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.4: IA Address Option Format	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.5: Elapsed Time Option Format for IA_NAs (B)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.7: Transmission of Decline messages (A) (B) (C) (D) (E) <i>Note: The Client may include T1/T2 and valid/preferred lifetime fields with the value 0</i>	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.9: Reception of Reply messages (A) (B) (C) (D) (E) (F)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.12: Reception of Reply messages after a Decline message	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.13: Reception of Invalid Reply message – IA_NA Option (A) (B)	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.14: Address Change	Client
RFC 8415	DHCPv6-Conf	DHCP_Conf.2.1.17: Singleton Options for IA_NAs (B)	Client

References:

- [RFC 8415] Mrugalski, T., M. Siodelski, B. Volz, A. Yourtchenko, M. Richardson, S. Jiang, T. Lemon, and T. Winters, Dynamic Host Configuration Protocol for IPv6 (DHCPv6), RFC 8415, November 2018.
- [RFC 3646] Droms, R., Editor, DNS Configuration options for Dynamic Host Configuration Protocol for IPv6 (DHCPv6), RFC 3646, December 2003.

The objective of this test selection sheet is to provide a reference for available test specifications that identifies tests applicable to the USGv6 Profile.