	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
Type	FRR	FRR	FRR	FRR	FRR			
Commit ID	04c9a28							
Commit Date	2023-06-15							
IPV6-MLD-1.1	RFC 2710 s3 p2 Message Format							
MUST	`All MLD messages described ... sent with a link-local IPv6 Source Address, an IPv6 Hop Limit of 1, and an IPv6 Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header. (Tests that MLD General Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.2	NEGATIVE RFC 2710 s3 p2 Message Format							
MUST	`All MLD messages described in this document are sent with a link-local IPv6 Source Address, ... in a Hop-by-Hop Options header. (Tests that MLD General Query Message conforms to above statement for link-local IPv6 Source Address)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.3	NEGATIVE RFC 2710 s3 p2 Message Format							
SHOULD	`All MLD messages described in this document are sent with ... an IPv6 Hop Limit of 1, ... Options header. (Tests that MLD General Query Message conforms to above statement for IPv6 Hop Limit)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-1.4 **MUST**	NEGATIVE RFC 2710 s3 p2 Message Format							
	`All MLD messages described ... sent with ... IPv6 Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header. (Tests that MLD General Query Message conforms to above statement for Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.5 **MUST**	NEGATIVE RFC 2710 s3 p2 Message Format RFC 2460 s4 p6 IPv6 Extension Headers							
	`All MLD messages ... are sent with ... Hop-by-Hop Options header. (IPv6 Specification) The Hop-by-Hop Options header, when present, must immediately follow the IPv6 header (Tests that MLD General Query Message conforms to above statement for ordering of Hop-by-Hop Options header)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-1.6 **MUST**	RFC 2710 s3 p2 Message Format							
	`All MLD messages described ... are sent with a link-local IPv6 Source Address, an IPv6 Hop Limit of 1, and an IPv6 Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-1.7 **MUST**	NEGATIVE RFC 2710 s3 p2 Message Format							
	All MLD messages described in this document are sent with a link-local IPv6 Source Address, ... in a Hop-by-Hop Options header. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement for link-local IPv6 Source Address)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.8 **SHOULD**	NEGATIVE RFC 2710 s3 p2 Message Format							
	All MLD messages described in this document are sent with ... an IPv6 Hop Limit of 1, ... Options header. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement for IPv6 Hop Limit)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.9 **MUST**	NEGATIVE RFC 2710 s3 p2 Message Format							
	All MLD messages described ... sent with ... IPv6 Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement for Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-1.10	NEGATIVE RFC 2710 s3 p2 Message Format RFC 2460 s4 p6 IPv6 Extension Headers							
MUST	`All MLD messages ... sent with ... Hop-by-Hop Options header. (IPv6 Specification) The Hop-by-Hop Options header, when present, must immediately follow the IPv6 header (Tests that MLD M-A-S Query Message conforms to above statement for ordering of Hop-by-Hop Options header)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.11	RFC 2710 s3 p2 Message Format							
MUST	`All MLD messages described in this document are sent with a link-local IPv6 Source Address, an IPv6 Hop Limit of 1, and an IPv6 Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header. (Tests that MLD Report Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.12	NEGATIVE RFC 2710 s3 p2 Message Format							
MUST	`All MLD messages described in this document are sent with a link-local IPv6 Source Address, ... in a Hop-by-Hop Options header. (Tests that MLD Report Message conforms to above statement for link-local IPv6 Source Address)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-1.13	NEGATIVE RFC 2710 s3 p2 Message Format							
SHOULD	`All MLD messages described in this document are sent with ... an IPv6 Hop Limit of 1, ... Options header. (Tests that MLD Report Message conforms to above statement for IPv6 Hop Limit)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.14	NEGATIVE RFC 2710 s3 p2 Message Format							
MUST	`All MLD messages described ... sent with ... IPv6 Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header. (Tests that MLD Report Message conforms to above statement for Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.15	NEGATIVE RFC 2710 s3 p2 Message Format RFC 2460 s4 p6 IPv6 Extension Headers							
MUST	`All MLD messages ... sent with ... Hop-by-Hop Options header. (IPv6 Specification) The Hop-by-Hop Options header, when present,must immediately follow the IPv6 header (Tests that MLD Report Message conforms to above statement for ordering of Hop-by-Hop Options header)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.16	RFC 2710 s3 p2 Message Format							
MUST	`All MLD messages described in this document are sent with a link-local IPv6 Source Address, an IPv6 Hop Limit of 1, and an IPv6 Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header. (Tests that MLD Done Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-1.17	NEGATIVE RFC 2710 s3 p2 Message Format							
SHOULD	`All MLD messages described in this document are sent with a link-local IPv6 Source Address, ... in a Hop-by-Hop Options header. (Tests that MLD Done Message conforms to above statement for link-local IPv6 Source Address)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.18	NEGATIVE RFC 2710 s3 p2 Message Format							
SHOULD	`All MLD messages described in this document are sent with ... an IPv6 Hop Limit of 1, ... Options header. (Tests that MLD Done Message conforms to above statement for IPv6 Hop Limit)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.19	NEGATIVE RFC 2710 s3 p2 Message Format							
MUST	`All MLD messages described ... sent with ... IPv6 Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header. (Tests that MLD Done Message conforms to above statement for Router Alert option [RTR-ALERT] in a Hop-by-Hop Options header)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-1.20	NEGATIVE RFC 2710 s3 p2 Message Format RFC 2460 s4 p6 IPv6 Extension Headers							
MUST	`All MLD messages ... sent with ... Hop-by-Hop Options header. (IPv6 Specification) The Hop-by-Hop Options header, when present,must immediately follow the IPv6 header (Tests that MLD Done Message conforms to above statement for ordering of Hop-by-Hop Options header)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-2.1 **MUST**	RFC 2710 s3.2 p3 Code							
	`All MLD Messages' Code Field Initialized to zero by the sender; (Tests that MLD General Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-2.2 **MUST**	RFC 2710 s3.2 p3 Code							
	`All MLD Messages' Code Field Initialized to zero by the sender; (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-2.3 **MUST**	(Tests that MLD Report Message conforms to above statement) RFC 2710 s3.2 p3 Code							
	`All MLD Messages' Code Field Initialized to zero by the sender;`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-2.4 **MUST**	RFC 2710 s3.2 p3 Code							
	`All MLD Messages' Code Field Initialized to zero by the sender; (Tests that MLD Done Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-2.5 **MUST**	RFC 2710 s3.2 p3 Code							
	All MLD Messages' Code Field ignored by receivers. (Tests that General Query Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-2.6 **MUST**	RFC 2710 s3.2 p3 Code							
	All MLD Messages' Code Field ignored by receivers. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-2.7 **MUST**	RFC 2710 s3.2 p3 Code							
	All MLD Messages' Code Field ignored by receivers. (Tests when MLD Report Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-2.8 **MUST**	RFC 2710 s3.2 p3 Code							
	All MLD Messages' Code Field ignored by receivers. (Tests when MLD Done Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-3.1 **MUST**	RFC 2710 s3.4 p3 Maximum Response Delay							
	`The Maximum Response Delay field is meaningful only in Query messages ... In all other messages, it is set to zero by the sender (Tests when MLD Report Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-3.2 **MUST**	RFC 2710 s3.4 p3 Maximum Response Delay							
	`The Maximum Response Delay field is meaningful only in Query messages ... In all other messages, it is set to zero by the sender (Tests MLD Done Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-3.3 **MUST**	RFC 2710 s3.4 p3 Maximum Response Delay							
	`The Maximum Response Delay field is meaningful only in Query messages ... In all other messages ... ignored by receivers. (Tests when MLD Report Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-3.4 **MUST**	RFC 2710 s3.4 p3 Maximum Response Delay							
	`The Maximum Response Delay field is meaningful only in Query messages ... In all other messages ... ignored by receivers. (Tests that MLD Done Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-4.1 **MUST**	RFC 2710 s3.5 p4 Reserved							
	`MLD Message Reserved Field is Initialized to zero by thesender; (Tests that MLD General Query Message conforms toabove statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-4.2 **MUST**	RFC 2710 s3.5 p4 Reserved							
	`MLD Message Reserved Field is Initialized to zero by the sender; (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-4.3 **MUST**	(Tests that MLD Report Message conforms to above statement) RFC 2710 s3.5 p4 Reserved							
	`MLD Message Reserved Field is Initialized to zero by the sender;`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-4.4 **MUST**	RFC 2710 s3.5 p4 Reserved							
	`MLD Message Reserved Field is Initialized to zero by the sender; (Tests when MLD Done Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-4.5 **MUST**	RFC 2710 s3.5 p4 Reserved							
	`MLD Message Reserved Field is ignored by receivers. (Tests when MLD General Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-4.6 **MUST**	RFC 2710 s3.5 p4 Reserved							
	`MLD Message Reserved Field is ignored by receivers. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-4.7 **MUST**	RFC 2710 s3.5 p4 Reserved							
	`MLD Message Reserved Field is ignored by receivers. (Tests that MLD Report Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-4.8 **MUST**	RFC 2710 s3.5 p4 Reserved							
	`MLD Message Reserved Field is ignored by receivers. (Tests that MLD Done Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-5.1 **MUST**	RFC 2710 s3.6 p4 Multicast Address RFC 2710 s5 p8 Node State Transition Diagram							
	`In a Query message, the Multicast Address field is set to zero when sending a General Query (Tests that MLD General Query Message conforms to abovestatement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-5.2 **MUST**	RFC 2710 s3.6 p4 Multicast Address RFC 2710 s5 p8 Node State Transition Diagram							
	`In a Query message, ... and set to a specific IPv6 multicast address when sending a Multicast-Address-Specific Query. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-5.3 **MUST**	RFC 2710 s3.6 p4 Multicast Address							
	`In a Report message, the Multicast Address field holds a specific IPv6 multicast address to which the message sender is listening`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-5.4 **MUST**	RFC 2710 s3.6 p4 Multicast Address							
	`In a Done message, the Multicast Address field holds a specific IPv6 multicast address to which the message sender is ceasing to listen, respectively.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-6.1 **MUST**	RFC 2710 s3.7 p4 Other fields							
	`An implementation of the version of MLD specified in this document MUST NOT send an MLD message longer than 24 octets. (Tests that MLD General Query Message conforms to abovestatement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-6.2 **MUST**	RFC 2710 s3.7 p4 Other fields							
	`An implementation of the version of MLD specified in this document MUST NOT send an MLD message longer than 24 octets. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-6.3 **MUST**	RFC 2710 s3.7 p4 Other fields							
	`An implementation of the version of MLD specified in this document MUST NOT send an MLD message longer than 24 octets. (Tests that MLD Report Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-6.4 **MUST**	RFC 2710 s3.7 p4 Other fields							
	`An implementation of the version of MLD specified in this document MUST NOT send an MLD message longer than 24 octets. (Tests that MLD Done Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-6.5 **MUST**	RFC 2710 s3.7 p4 Other fields							
	An implementation of the version of MLD specified... and MUST ignore anything past the first 24 octets of a received MLD message. (Tests that General Query Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-6.6 **MUST**	RFC 2710 s3.7 p4 Other fields							
	An implementation of the version of MLD specified... and MUST ignore anything past the first 24 octets of a received MLD message. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-6.7 **MUST**	RFC 2710 s3.7 p4 Other fields							
	An implementation of the version of MLD specified... and MUST ignore anything past the first 24 octets of a received MLD message. (Tests that MLD Report Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-6.8 **MUST**	RFC 2710 s3.7 p4 Other fields							
	An implementation of the version of MLD specified... and MUST ignore anything past the first 24 octets of a received MLD message. (Tests that MLD Done Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-6.9	RFC 2710 s3.7 p4 Other fields							
MUST	`In all cases, the MLD checksum MUST be computed over the entire MLD message, not just the first 24 octets. (Tests that MLD General Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-6.10	RFC 2710 s3.7 p4 Other fields							
MUST	`In all cases, the MLD checksum MUST be computed over the entire MLD message, not just the first 24 octets. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-6.11	RFC 2710 s3.7 p4 Other fields							
MUST	`In all cases, the MLD checksum MUST be computed over the entire MLD message, not just the first 24 octets. (Tests when MLD Report Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-6.12	RFC 2710 s3.7 p4 Other fields							
MUST	`In all cases, the MLD checksum MUST be computed over the entire MLD message, not just the first 24 octets. (Tests when MLD Done Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-7.1 **MUST**	RFC 2710 s4 p4 Protocol Description							
	For each attached link, a router selects one of its link-local unicast addresses on that link to be used as the IPv6 Source Address in all MLD packets it transmits on that link. (Tests that MLD General Query Message conforms to above							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.2 **MUST**	RFC 2710 s4 p4 Protocol Description							
	For each attached link, a router selects one of its link-local unicast addresses on that link to be used as the IPv6 Source Address in all MLD packets it transmits on that link. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.3 **MUST**	RFC 2710 s4 p4 Protocol Description							
	For each attached link, a router selects one of its link-local unicast addresses on that link to be used as the IPv6 Source Address in all MLD packets it transmits on that link. (Tests that MLD Report Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.4 **MUST**	RFC 2710 s4 p4 Protocol Description							
	For each attached link, a router selects one of its link-local unicast addresses on that link to be used as the IPv6 Source Address in all MLD packets it transmits on that link. (Tests that MLD Done Message conforms to above statement)							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-7.5 **MUST**	RFC 2710 s4 p5 Protocol Description							
	`For each ... the router must configure that interface to listen to all link-layer multicast address that can be generated by IPv6 multicasts.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.6 **MUST**	RFC 2710 s4 p5 Protocol Description							
	`If a router hears a Query message whose IPv6 Source Address is numerically less than its own selected address for that link, it MUST become a Non-Querier on that link.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.7 **MUST**	NEGATIVE RFC 2710 s4 p5 Protocol Description							
	`If a router hears a Query message whose IPv6 Source Address is numerically less than its own selected address for that link, it MUST become a Non-Querier on that link.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.8 **MUST**	RFC 2710 s4 p5 Protocol Description							
	`If [Other Querier Present Interval] passes without receiving, from a particular attached link, any Queries from a router with an address less than its own, a router resumes the role of Querier on that link.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-7.9	RFC 2710 s4 p5 Protocol Description							
SHOULD	`On startup, a router SHOULD send [Startup Query Count] General Queries spaced closely together [Startup Query Interval] on ... multicast listeners on those links. (Tests that router sends MLD Startup General Queries spaced closely together [Startup Query Interval])`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.10	RFC 2710 s4 p5 Protocol Description							
SHOULD	`On startup, a router SHOULD send [Startup Query Count] General Queries spaced closely together [Startup Query Interval] on ... multicast listeners on those links. (Tests that router sends [Startup Query Count] MLD Startup General Queries`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.11	RFC 2710 s4 p5 Protocol Description RFC 2710 s5 p10 Node State Transition Diagram							
MUST	`When a node receives a General Query, it sets a delay timer for each multicast address to which it is listening on the interface from which it received the Query, EXCLUDING the link-scope all-nodes address`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-7.12	RFC 2710 s4 p5 Protocol Description							
MUST	`When a node receives a General Query ... Each timer is set to a different random value, using the highest clock granularity available on the node, selected from the range [0, Maximum Response Delay] with Maximum Response Delay as specified in the Query packet.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-7.13	RFC 2710 s4 p5 Protocol Description							
MUST	`When a node receives a General Query ... if a timer for any address is already running, it is reset to the new random value only if the requested Maximum Response Delay is less than the remaining value of the running timer.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.14	RFC 2710 s4 p5 Protocol Description							
MUST	`When a node receives a General Query ... If the Query packet specifies a Maximum Response Delay of zero, each timer is effectively set to zero, and the action specified below for timer expiration is performed immediately.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.15	RFC 2710 s4 p6 Protocol Description							
MUST	`When a node receives a Multicast-Address-Specific Query, if it is listening to the queried Multicast Address on the interface from which the Query was received, it sets a delay timer for that address to a random value selected from the range [0, Maximum Response Delay], as above.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-7.16	RFC 2710 s4 p6 Protocol Description							
MUST	`When a node receives a Multicast-Address-Specific Query ... if a timer for the address is already running, it is reset to the new random value only if the requested Maximum Response Delay is less than the remaining value of the running timer.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.17	RFC 2710 s4 p6 Protocol Description							
MUST	`When a node receives a Multicast-Address-Specific Query ... If the Query packet specifies a Maximum Response Delay of zero, the timer is effectively set to zero, and the action specified below for expiration is performed immediately.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-7.18	RFC 2710 s4 p6							
MUST	`If a node's timer for a particular multicast address on ... the address being reported is carried in both the IPv6 Destination Address field and the MLD Multicast Address field of the Report packet.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-7.19	RFC 2710 s4 p6 Protocol Description							
MUST	`If a node receives another node's Report from an interface for a multicast address while it has a timer running for that same address on that interface, it stops its timer and does not send a Report for that address, thus suppressing duplicate reports on the link.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-7.20	RFC 2710 s4 p6 Protocol Description							
MUST	`When a router receives a Report from a link, if the reported address is not already present in the router's list of multicast address ... its timer is set to [Multicast Listener Interval], and its appearance is made known to the router's multicast routing component.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-7.21	RFC 2710 s4 p6 Protocol Description							
MUST	`If a Report is received for a multicast address that is already present in the router's list, the timer for that address is reset to [Multicast Listener Interval].`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-7.22	RFC 2710 s4 p6 Protocol Description							
MUST	`If an address's timer expires, it is assumed that there are no longer any listeners for that address present on the link, so it is deleted from the list and its disappearance is made known to the multicast routing component.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.23	RFC 2710 s4 p6 Protocol Description							
MUST	`When a node starts listening to a Multicast Address on an interface, it should immediately transmit an unsolicited Report for that address on that interface, in case it is the first listener on the link`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-7.24	RFC 2710 s4 p6							
MUST	`To cover the possibility of the initial Report being lost or damaged, it is recommended that it be repeated once or twice after short delays [Unsolicited Report Interval].`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-7.25	RFC 2710 s4 p7 Protocol Description							
SHOULD	`When a node ceases to listen to a multicast address on an interface, it SHOULD send a single Done message to the link-scope all-routers multicast address (FF02::2), carrying in its Multicast Address field the address to which it is ceasing to listen.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-7.26	RFC 2710 s4 p7 Protocol Description							
MUST	`If the node's most recent Report message was suppressed by hearing another Report message, it MAY send nothing, ... highly likely that there is another listener for that address still present on the same link.If this optimization is implemented, it MUST be able to be turned off but SHOULD default to on.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-7.27	RFC 2710 s4 p7 Protocol Description RFC 2710 s6 p14 Router State Transition Diagram							
MUST	`When a router in Querier state receives a Done message ... the Querier sends [Last Listener Query Count] Multicast-Address-Specific Queries, one every [Last Listener Query Interval] to that multicast address.` `(Tests that Querier sends in every [LastListenerQueryInterval])`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-7.28	RFC 2710 s4 p7 Protocol Description							
MUST	`When a router in Querier state receives a Done message ... the Querier sends [Last Listener Query Count] Multicast-Address-Specific Queries, one every [Last Listener Query Interval] to that multicast address. (Tests that Querier sends [Last Listener Query Count] Messages)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.29	RFC 2710 s4 p7 Protocol Description RFC 2710 s5 p13 Node State Transition Diagram							
MUST	`These Multicast-Address-Specific Queries have their Maximum Response Delay set to [Last Listener Query Interval].`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-7.30	RFC 2710 s4 p7 Protocol Description							
MUST	`If no Reports for the address are received from the link after the response delay of the last query has passed, the routers on the link assume that the address no longer has any listeners there; the address is therefore deleted from the list and its disappearance is made known to the multicast routing component.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-7.31	RFC 2710 s4 p7 Protocol Description RFC 2710 s6 p14 Router State Transition Diagram							
MUST	`This process is continued to its resolution (i.e. until a Report is received or the last MLD Multicast-Address-Specific Query Message is sent with no response) despite any transition from Querier to Non-Querier on this link.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-7.32 **MUST**	RFC 2710 s4 p7 Protocol Description							
	`Routers in Non-Querier state MUST ignore Done messages.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-8.1 **MUST**	RFC 2710 s5 p8 Node State Transition Diagram RFC 2710 s6 p11 Router State Transition Diagram							
	`To be valid, the Query message MUST come from a link-local IPv6 Source Address, be at least 24 octets long, and have a correct MLD checksum. (Tests that MLD General Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-8.2 **MUST**	RFC 2710 s5 p8 Node State transition Diagram RFC 2710 s6 p11 Router State Transition Diagram RFC 2710 s6 p13 Router State Transition Diagram							
	`To be valid, the Query message MUST come from a link-local IPv6 Source Address, be at least 24 octets long, and have a correct MLD checksum. (Tests that MLD Multicast-Address-Specific Query Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-8.3 **MUST**	RFC 2710 s5 p8 Node State transition Diagram RFC 2710 s6 p13 Router State Transition Diagram							
	`To be valid, the Report message MUST come from a link-local IPv6 Source Address, be at least 24 octets long, and have a correct MLD checksum. (Tests that MLD Report Message conforms to above statement)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-8.4 **MUST**	RFC 2710 s5 p8 Node State Transition Diagram							
	`Queries are ignored for addresses in the Non-Listener state.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-8.5 **MUST**	RFC 2710 s5 p10 Node State Transition Diagram							
	`MLD messages are never sent for multicast addresses whose scope is 0 (reserved)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-8.6 **MUST**	RFC 2710 s5 p10 Node State Transition Diagram							
	`MLD messages are never sent for multicast addresses whose scope is 1 (node-local)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-8.7 **MUST**	RFC 2710 s5 p10 Node State Transition Diagram							
	`MLD messages ARE sent for multicast addresses whose scope is 2 (link-local),including Solicited-Node multicast addresses [ADDR-ARCH], except for the link-scope, all-nodes address (FF02::1). (Tests that MLD messages are sent for Solicited-Node multicast addresses)`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							

	Release 8_5_2	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x	Release x.x.x
IPV6-MLD-9.1 **MUST**	RFC 2710 s6 p13 Router State Transition Diagram							
	`To be valid, the Done message MUST come from a link-local IPv6 Source Address, be at least 24 octets long, and have a correct MLD checksum.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: FAIL							
	Free BSD 12.0 untested							
IPV6-MLD-9.2 **MUST**	RFC 2710 s6 p13 Router State Transition Diagram RFC 2710 s4 p7 Protocol Description							
	`start timer* ... the Maximum Response Delay in the Query message * [Last Listener Query Count] if this router is a non-Querier. When a router in Non-Querier state receives a Multicast-Address-Specific Query, ... address is greater than [Last Listener Query Count] times the Maximum Response Delay ... that latter value.`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							
IPV6-MLD-9.3 **MUST**	RFC 2710 s6 p15 Router State Transition Diagram							
	`Initial State : Checking Listener Event : rexmt timer expired Action : Send Multicast Address Specific Queries Final State : Checking Listener`							
	Free BSD 10.3 untested							
	Ubuntu 18.04: pass							
	Free BSD 12.0 untested							