



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
Type	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR
Commit ID	36a7e78	5dff4ec	7a377a1	85f25d8	33e56da	056c0cd	23db048	c0038fc	13a8efb	9931db7	79188bf	d66a1ca	99477bc	70151e2	62ac43d
Commit Date	2017-11-08	2018-01-09	2018-03-12	2018-07-05	2019-05-09	2019-05-13	2019-06-18	2020-02-14	2021-02-27	2021-07-21	2022-03-13	2022-07-19	2022-11-03	2022-11-18	2023-01-10
ANVL-BGPPLUS-1.1															
MUST	ANVL, setup verification														
	ANVL, Setup Verification DUT Listens on TCP port 179 for BGP4 Connection														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested						
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-1.2															
MUST	ANVL, setup verification														
	ANVL, Setup Verification Establish BGP4 connection to the DUT and transit to Established state														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested						
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-1.3															
MUST	ANVL, setup verification														
	ANVL, Setup Verification Router adds routes contained in the newly received Update Message to its routing table														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested						
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: unpredict	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass



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ANVL-BGPPLUS-2.1 MUST	RFC4760, Sect. 1: Introduction, p 1, Overview														
	Requirement of IPv4 address for Multiprotocol Extensions This document assumes that any BGP speaker (including the one that supports multiprotocol capabilities defined in this document) has to have an IPv4 address (which will be used, among other things, in the AGGREGATOR attribute).														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-3.1 MUST	RFC 4760, Sect. 3, p 2, Multiprotocol Reachable NLRI - MP_REACH_NLRI (Type Code 14)														
	Purpose of MP_REACH_NLRI attribute This is an optional non-transitive attribute that can be used for the following purposes: (a) to advertise a feasible route to a peer (b) to permit a router to advertise the Network Layer address of the router that should be used as the next hop to the destinations listed in the Network Layer Reachability Information field of the MP_REACH_NLRI attribute.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-3.2 MUST	RFC 4760, Sect. 3, p 3, Multiprotocol Reachable NLRI - MP_REACH_NLRI (Type Code 14) Reserved														
	Purpose of MP_REACH_NLRI attribute A 1 octet field that MUST be set to 0, and SHOULD be ignored upon receipt. Note: Here we check that the Reserved field is set to 0														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				





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ANVL-BGPPLUS-3.6	RFC 4760, Sect. 3, p 4, Multiprotocol Reachable NLRI - MP_REACH_NLRI (Type Code 14)														
MUST	Purpose of MP_REACH_NLRI attribute Moreover, in IBGP exchanges such a message must also carry the LOCAL_PREF attribute.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-3.7	NEGATIVE RFC 4760, Sect. 3, p 4, Multiprotocol Reachable NLRI - MP_REACH_NLRI (Type Code 14)														
SHOULD	Purpose of MP_REACH_NLRI attribute An UPDATE message that carries no NLRI, other than the one encoded in the MP_REACH_NLRI attribute, SHOULD NOT carry the NEXT_HOP attribute. If such a message contains the NEXT_HOP attribute, the BGP speaker that receives the message SHOULD ignore this attribute.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-4.1	RFC 4760, Sect. 4, p 5, Multiprotocol Unreachable NLRI - MP_UNREACH_NLRI (Type Code 15):														
MUST	Purpose of MP_UNREACH_NLRI attribute An UPDATE message that contains the MP_UNREACH_NLRI is not required to carry any other path attributes.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass



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ANVL-BGPPLUS-5.1	NEGATIVE RFC 4760, Sect. 7, p 8, Error Handling														
MUST	<p>Error Handling</p> <p>If a BGP speaker receives from a neighbor an Update message that contains the MP_REACH_NLRI or MP_UNREACH_NLRI attribute, and the speaker determines that the attribute is incorrect, the speaker must delete all the BGP routes received from that neighbor whose AFI/SAFI is the same as the one carried in the incorrect MP_REACH_NLRI or MP_UNREACH_NLRI attribute.</p> <p>(Note: ANVL sends two updates, the second update containing MP_REACH_NLRI attribute with incorrect length of nlri set to 129</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-5.2	NEGATIVE RFC 4760, Sect. 7, p 8, Error Handling														
MUST	<p>Error Handling</p> <p>If a BGP speaker receives from a neighbor an Update message that contains the MP_REACH_NLRI or MP_UNREACH_NLRI attribute, and the speaker determines that the attribute is incorrect, the speaker must delete all the BGP routes received from that neighbor whose AFI/SAFI is the same as the one carried in the incorrect MP_REACH_NLRI or MP_UNREACH_NLRI attribute.</p> <p>(Note: ANVL sends two updates, the second update containing MP_UNREACH_NLRI attribute with SAFI set to Unicast even when the route is Multicast)</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-5.3	NEGATIVE RFC 4760, Sect. 7, p 8, Error Handling														
MAY	Error Handling In addition, the speaker may terminate the BGP session over which the Update message was received. (Note: Here, the UPDATE sent by ANVL contains incorrect NLRI length 129)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-5.4	NEGATIVE RFC 4760, Sect. 7, p 8, Error Handling														
MAY	Error Handling In addition, the speaker may terminate the BGP session over which the Update message was received. (Note: Here, the UPDATE sent by ANVL contains incorrect MP_UNREACH_NLRI which causes DUT to close the BGP4 connection with the sending peer)														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-5.5 SHOULD	NEGATIVE RFC 4760, Sect. 7, p 8, Error Handling RFC 4271, Sect. 6.3, p 34, UPDATE message error handling														
	<p>Error Handling The session should be terminated with the Notification message code/subcode indicating "Update Message Error"/"Optional Attribute Error".</p> <p>The NLRI field in the UPDATE message is checked for syntactic validity. If the field is syntactically incorrect, then the Error Subcode MUST be set to Invalid Network Field.</p> <p>(Note: Here we are checking this behavior using incorrect MP_REACH_NLRI attribute in the BGP4 UPDATE Message sent by ANVL)</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-5.6 SHOULD	NEGATIVE RFC 4760, Sect. 7, p 8, Error Handling RFC 4271, Sect. 6.3, p 34, UPDATE message error handling														
	<p>Error Handling The session should be terminated with the Notification message code/subcode indicating "Update Message Error"/"Optional Attribute Error".</p> <p>The NLRI field in the UPDATE message is checked for syntactic validity. If the field is syntactically incorrect, then the Error Subcode MUST be set to Invalid Network Field.</p> <p>(Note: Here we are checking this behavior using incorrect MP_UNREACH_NLRI attribute in the BGP4 UPDATE Message sent by ANVL)</p>														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-6.1 SHOULD	RFC 4760, Sect. 8, p 8, Use of BGP Capability Advertisement														
	BGP4 Capability Advertisement A BGP speaker that uses Multiprotocol Extensions should use the Capability Advertisement procedures [BGP-CAP] to determine whether the speaker could use Multiprotocol Extensions with a particular peer.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-6.2 MUST	RFC 4760, Sect. 8, p 9, Use of BGP Capability Advertisement														
	BGP4 Capability Advertisement A speaker that supports multiple AFI, SAFI> tuples includes them as multiple Capabilities in the Capabilities Optional Parameter.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-6.3 MUST	RFC 4760, Sect. 8, p 9, Use of BGP Capability Advertisement														
	BGP4 Capability Advertisement To have a bi-directional exchange of routing information for a particular AFI, SAFI> between a pair of BGP speakers, each such speaker must advertise to the other (via the Capability Advertisement mechanism) the capability to support that particular AFI, SAFI> routes.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-7.1 MUST	NEGATIVE RFC 4760, Sect. 9, p 9, IANA Considerations														
	IANA Considerations SAFI value 0 and 255 are reserved.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-8.1 MUST	RFC 2545, Sect. 2, p 2, IPv6 Address Scopes														
	IPv6 Address Scopes As this document makes no assumption on the characteristics of a particular routing realm where BGP-4 is used, it makes no distinction between global and site-local addresses and refers to both as "global" or "non-link-local".														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL				
ANVL-BGPPLUS-9.1 SHOULD	NEGATIVE RFC 2545, Sect. 3, p 2, Constructing the Next Hop field														
	Next Hop field The value of the Length of Next Hop Network Address field on a MP_REACH_NLRI attribute shall be set to 16, when only a global address is present, or 32 if a link-local address is also included in the Next Hop field. (Note: In this test we send only a link-local address even when we set the length of NEXT_HOP field to 16)														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-9.2 MUST	RFC 2545, Sect. 3, p 2, Constructing the Next Hop field RFC 2545, Sect. 3, p 3, Constructing the Next Hop field														
	<p>Next Hop field</p> <p>The value of the Length of Next Hop Network Address field on a MP_REACH_NLRI attribute shall be set to 16, when only a global address is present, or 32 if a link-local address is also included in the Next Hop field. In all other cases a BGP speaker shall advertise to its peer in the Network Address field only the global IPv6 address of the next hop (the value of the Length of Network Address of Next Hop field shall be set to 16).</p> <p>(Note: Here we test that DUT correctly sets the NEXT_HOP field of MP_REACH_NLRI attribute when length is set to 16)</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-9.3 SHOULD	RFC 2545, Sect. 2, p 2, IPv6 Address Scopes RFC 2545, Sect. 3, p 2, Constructing the Next Hop field														
	<p>Next Hop field</p> <p>A BGP speaker shall advertise to its peer in the Network Address of Next Hop field the global IPv6 address of the next hop, potentially followed by the link-local IPv6 address of the next hop.</p> <p>The value of the Length of Next Hop Network Address field on a MP_REACH_NLRI attribute shall be set to 16, when only a global address is present, or 32 if a link-local address is also included in the Next Hop field.</p> <p>The link-local address shall be included in the Next Hop field if and only if the BGP speaker shares a common subnet with the entity identified by the global IPv6 address carried in the Network Address of Next Hop field and the peer the route is being advertised to.</p> <p>(Note: Here, we verify that the DUT correctly sends the link-local address along with the non-link-local address in its UPDATE Message. This test uses FIRST PARTY NEXT_HOP)</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-9.4	NEGATIVE RFC 2545, Sect. 3, p 2, Constructing the Next Hop field														
SHOULD	<p>Next Hop field The link-local address shall be included in the Next Hop field if and only if the BGP speaker shares a common subnet with the entity identified by the global IPv6 address carried in the Network Address of Next Hop field and the peer the route is being advertised to. (Note: Here, we test that the DUT does not accept a UPDATE sent by ANVL containing an off-net non-link-local IPv6 Address following by a link-local IPv6 Address of sending interface. This test verifies FIRST PARTY NEXT_HOP)</p>														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL					
ANVL-BGPPLUS-9.5	RFC 2545, Sect. 3, p 2, Constructing the Next Hop field RFC 2545, Sect. 3, p 3, Constructing the Next Hop field														
MAY	<p>Next Hop field The link-local address shall be included in the Next Hop field ... In all other cases a BGP speaker shall advertise to its peer in the Network Address field only the global IPv6 address of the next hop... As a consequence, a BGP speaker that advertises a route to an internal peer may modify the Network Address of Next Hop field by removing the link-local IPv6 address of the next hop.</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-10.1 MUST	RFC 2545, Sect. 4, p 3 Transport														
	Transport layer independance TCP connections, on top of which BGP-4 messages are exchanged, can be established either over IPv4 or IPv6. While BGP-4 itself is independent of the particular transport used it derives implicit configuration information from the address used to establish the peering session. This information (the network address of a peer) is taken in account in the route dissemination procedure. IPv6/IPv6 AFI and Unicast SAFI (Note: This test is to verify that DUT correctly specifies the NLRI and NEXT_HOP field types in MP_REACH_NLRI attribute as IPv6 in its BGP4 Update Message over TCP/IPv6 through AFI/SAFI> combination)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-10.2 MUST	RFC 2545, Sect. 4, p 3 Transport														
	Transport layer independance TCP connections, on top of which BGP-4 messages are exchanged, can be established either over IPv4 or IPv6. While BGP-4 itself is independent of the particular transport used it derives implicit configuration information from the address used to establish the peering session. This information (the network address of a peer) is taken in account in the route dissemination procedure. (Note: This test is to verify that DUT correctly specifies its IPv6 route advertisement capabilities in BGP4 Open Message when running over TCP/IPv4)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-10.3 MUST	RFC 2545, Sect. 4, p 3 Transport														
	Transport layer independance TCP connections, on top of which BGP-4 messages are exchanged, can be established either over IPv4 or IPv6. While BGP-4 itself is independent of the particular transport used it derives implicit configuration information from the address used to establish the peering session. This information (the network address of a peer) is taken in account in the route dissemination procedure. (Note: This test is to verify that DUT correctly specifies the NLRI and NEXT_HOP field types in MP_REACH_NLRI attribute as IPv6 in its BGP4 Update Message over TCP/IPv4 through AFI/SAFI> combination)														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL								
ANVL-BGPPLUS-10.4 MUST	RFC 2545, Sect. 4, p 3 Transport														
	Transport layer independance TCP connections, on top of which BGP-4 messages are exchanged, can be established either over IPv4 or IPv6. While BGP-4 itself is independent of the particular transport used it derives implicit configuration information from the address used to establish the peering session. This information (the network address of a peer) is taken in account in the route dissemination procedure. (Note: This test is to verify that DUT correctly specifies its IPv4 route advertisement capabilities in BGP4 Open Message when running over TCP/IPv6)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass								



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-10.5 MUST	RFC 2545, Sect. 4, p 3 Transport														
	Transport layer independance TCP connections, on top of which BGP-4 messages are exchanged, can be established either over IPv4 or IPv6. While BGP-4 itself is independent of the particular transport used it derives implicit configuration information from the address used to establish the peering session. This information (the network address of a peer) is taken in account in the route dissemination procedure. (Note: This test is to verify that DUT correctly specifies the NLRI and NEXT_HOP field types in MP_REACH_NLRI attribute as IPv4 in its BGP4 Update Message over TCP/IPv6 through AFI/SAFI> combination)														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL								
ANVL-BGPPLUS-10.6 MUST	RFC 2545, Sect. 4, p 3 Transport														
	Transport layer independance TCP connections, on top of which BGP-4 messages are exchanged, can be established either over IPv4 or IPv6. While BGP-4 itself is independent of the particular transport used it derives implicit configuration information from the address used to establish the peering session. This information (the network address of a peer) is taken in account in the route dissemination procedure. (Note: This test is to verify that DUT correctly specifies its IPv4 route advertisement capabilities in BGP4 Open Message when running over TCP/IPv4)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass								



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-10.7 MUST	RFC 2545, Sect. 4, p 3 Transport														
	Transport layer independance TCP connections, on top of which BGP-4 messages are exchanged, can be established either over IPv4 or IPv6. While BGP-4 itself is independent of the particular transport used it derives implicit configuration information from the address used to establish the peering session. This information (the network address of a peer) is taken in account in the route dissemination procedure. (Note: This test is to verify that DUT correctly specifies the NLRI and NEXT_HOP field types in MP_REACH_NLRI attribute as IPv4 in its BGP4 Update Message over TCP/IPv4 through AFI/SAFI> combination)														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL				
ANVL-BGPPLUS-10.8 MUST	RFC 2545, Sect. 4, p 3 Transport														
	Transport layer independance TCP connections, on top of which BGP-4 messages are exchanged, can be established either over IPv4 or IPv6. While BGP-4 itself is independent of the particular transport used it derives implicit configuration information from the address used to establish the peering session. This information (the network address of a peer) is taken in account in the route dissemination procedure. (Note: This test is to verify that DUT correctly specifies the NLRI and Next Hop when sending an update to a peer over TCP-V4> received from a different peer over TCP-V6>)														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-12.3	MUST														
	NEGATIVE RFC 4271, Sect. 4.2, p 12, OPEN Message Format RFC 4271, Sect. 6.2, p 31, OPEN message error handling														
	OPEN Message Format The Hold Time MUST be either zero or at least three seconds. If the Hold Time field of the OPEN message is unacceptable, then the Error Subcode MUST be set to Unacceptable Hold Time. An implementation MUST reject Hold Time values of one or two seconds. (Note: Here we test the Hold Time value with 1 second and 2 seconds)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-12.4	MUST														
	NEGATIVE RFC 4271, Sect. 4.2, p 13, OPEN Message Format														
	OPEN Message Format The calculated value for Hold Time indicates the maximum number of seconds that may elapse between the receipt of successive KEEPALIVE, and/or UPDATE messages by the sender. (Note: Here, we test that the DUT sends a NOTIFICATION message due to not receiving successive UPDATE/KEEPALIVE messages within Hold Time Period)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2																																																																																																
ANVL-BGPPLUS-12.5 MUST	NEGATIVE RFC 4271, Sect. 4.2, p 13, OPEN Message Format																																																																																																														
OPEN Message Format The calculated value for Hold Time indicates the maximum number of seconds that may elapse between the receipt of successive KEEPALIVE, and/or UPDATE messages by the sender. (Note: Here, we test that the DUT sends a NOTIFICATION message due to not receiving successive KEEPALIVE messages within Hold Time Period)																																																																																																															
<table border="1"> <tr> <td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: untested</td><td>FreeBSD 10.3: untested</td></tr> <tr> <td>Ubuntu 16.04: pass</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td></tr> <tr> <td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td></tr> <tr> <td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td></tr> <tr> <td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td></tr> <tr> <td>FreeBSD 12.3: untested</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td></tr> </table>																FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: pass	Ubuntu 16.04: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	Ubuntu 18.04: pass	FreeBSD 12.3: untested	FreeBSD 12.3: pass																																																																											
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ANVL-BGPPLUS-13.1 MAY	RFC 4271, Sect. 4.3, p 14, UPDATE Message Format																																																																																																														
UPDATE Message Format An UPDATE message MAY simultaneously advertise a feasible route and withdraw multiple unfeasible routes from service.																																																																																																															
<table border="1"> <tr> <td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: untested</td><td>FreeBSD 10.3: untested</td></tr> <tr> <td>Ubuntu 16.04: pass</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td></tr> <tr> <td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td></tr> <tr> <td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td></tr> <tr> <td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td></tr> <tr> <td>FreeBSD 12.3: untested</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td></tr> </table>																FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: pass	Ubuntu 16.04: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	Ubuntu 18.04: pass	FreeBSD 12.3: untested	FreeBSD 12.3: pass																																																																											
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ANVL-BGPPLUS-13.2 MUST	RFC 4271, Sect. 4.3, p 16, UPDATE Message Format																																																																																																														
UPDATE Message Format For well-known attributes, the Transitive bit must be set to 1. (Note: Here we test with the path attribute type ORIGIN)																																																																																																															
<table border="1"> <tr> <td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: untested</td><td>FreeBSD 10.3: untested</td></tr> <tr> <td>Ubuntu 16.04: pass</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td></tr> <tr> <td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td></tr> <tr> <td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td></tr> <tr> <td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td></tr> <tr> <td>FreeBSD 12.3: untested</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td></tr> </table>																FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: pass	Ubuntu 16.04: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	Ubuntu 18.04: pass	FreeBSD 12.3: untested	FreeBSD 12.3: pass																																																																											
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-13.12	RFC 4271, Sect. 4.3, p 16, UPDATE Message Format														
MUST	<p>UPDATE Message Format The lower-order four bits of the Attribute Flags octet are unused. They MUST be zero when sent and MUST be ignored when received. (Note: Here we test that DUT sends UPDATE message with lower-order four bits of the ORIGIN Attribute Flags octets set to 0)</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-13.13	RFC 4271, Sect. 4.3, p 16, UPDATE Message Format														
MUST	<p>UPDATE Message Format The lower-order four bits of the Attribute Flags octet are unused. They MUST be zero when sent and MUST be ignored when received. (Note: Here we test that DUT ignores lower-order four bits of the ORIGIN Attribute Flag after receiving an UPDATE Message)</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-13.14	RFC 4271, Sect. 4.3, p 17, UPDATE Message Format														
MUST	<p>UPDATE Message Format ORIGIN is a well-known mandatory attribute that defines the origin of the path information. The data octet can assume the following value: 2 INCOMPLETE - Network Layer Reachability Information learned by some other means.</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-13.15 MUST	RFC 4271, Sect. 4.3, p 18, UPDATE Message Format														
	UPDATE Message Format ATOMIC_AGGREGATE is a well-known discretionary attribute of length 0.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested					
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-13.16 MUST	RFC 4271, Sect. 4.3, p 18, UPDATE Message Format														
	UPDATE Message Format AGGREGATOR is an optional transitive attribute of length 6.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested					
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-14.1 MUST	RFC 4271, Sect. 4.4, p 21, KEEPALIVE Message Format RFC 4271, Sect. 4.2, p 13, OPEN Message Format														
	KeepAlive Message Format KEEPALIVE messages MUST NOT be sent more frequently than one per second. The Hold Time MUST be either zero or at least three seconds.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: unpredict	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested					
	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: unpredict	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: unpredict	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL	Ubuntu 18.04: unpredict	Ubuntu 18.04: pass	Ubuntu 18.04: untested	Ubuntu 18.04: untested
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass





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ANVL-BGPPLUS-15.7 SHOULD	RFC 4271, Sect. 5, p 23, Path Attributes														
	Path Attributes Paths with unrecognized transitive optional attributes SHOULD be accepted.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-15.8 SHOULD	RFC 4271, Sect. 5, p 23, Path Attributes														
	Path Attributes If a path with unrecognized transitive optional attribute is accepted and passed along to other BGP peers, then the unrecognized transitive optional attribute of that path MUST be passed along with the path to other BGP peers														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-15.9 SHOULD	RFC 4271, Sect. 5, p 23, Path Attributes														
	Path Attributes If a path with unrecognized transitive optional attribute is accepted and passed along to other BGP peers, then the unrecognized transitive optional attribute of that path MUST be passed along with the path to other BGP peers with the Partial bit in the Attribute Flags octet set to 1.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested



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ANVL-BGPPLUS-15.10 MUST	RFC 4271, Sect. 5, p 23, Path Attributes														
	Path Attributes Unrecognized non-transitive optional attributes must be quietly ignored														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-15.11 MUST	RFC 4271, Sect. 5, p 24, Path Attributes														
	Path Attributes Unrecognized non-transitive optional attributes must not be passed along to other BGP peers.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-15.12 MAY	RFC 4271, Sect. 5, p 23, Path Attributes														
	Path Attributes New transitive optional attributes may be attached to the path by the originator or by any other AS (BGP Speaker) in the path. (Note: This test checks the case when originator attaches the transitive optional attribute AGGREGATOR)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-15.12 MAY	Ubuntu 18.04: untested														
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested
ANVL-BGPPLUS-15.12 MAY	FreeBSD 12.3: untested														
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested



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ANVL-BGPPLUS-15.13	NEGATIVE RFC 4271, Sect. 5, p 23, Path Attributes														
MAY	Path Attributes If new transitive optional attributes are not attached by the originator, the Partial bit in the Attribute Flags octet is set to 1.														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL									
ANVL-BGPPLUS-15.14	NEGATIVE RFC 4271, Sect. 5, p 23, Path Attributes														
MUST	Path Attributes The sender of an UPDATE message should order path attributes within the UPDATE message in ascending order of attribute type. The receiver of an UPDATE message MUST be prepared to handle path attributes within the UPDATE message that are out of order.														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL									
ANVL-BGPPLUS-15.15	NEGATIVE RFC 4271, Sect. 5, p 23, Path Attributes														
MUST	Path Attributes The same attribute (attribute with the same type) can not appear more than once within the path Attributes field of a particular UPDATE message.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass									



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2																																																																																																
ANVL-BGPPLUS-16.4 MUST	RFC 4271, Sect. 5.1.2, p 25, AS_PATH																																																																																																														
AS_PATH When a BGP speaker originates a route then the originating speaker shall include an empty AS_PATH attribute in all UPDATE messages sent to internal peers.																																																																																																															
<table border="1"> <tr><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: untested</td><td>FreeBSD 10.3: untested</td></tr> <tr><td>Ubuntu 16.04: pass</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td></tr> <tr><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td></tr> <tr><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td></tr> <tr><td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td></tr> <tr><td>FreeBSD 12.3: untested</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td></tr> </table>																FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: pass	Ubuntu 16.04: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass																																																																					
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ANVL-BGPPLUS-16.5 MUST	RFC 4271, Sect. 5.1.2, p 25, AS_PATH																																																																																																														
AS_PATH When a BGP speaker originates a route then the originating speaker shall include its own AS number in a path segment of type AS_SEQUENCE in the AS_PATH attribute of all UPDATE messages sent to an external peer.																																																																																																															
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ANVL-BGPPLUS-17.1 MAY	RFC 4271, Sect. 5.1.3, p 25-26, NEXT_HOP																																																																																																														
NEXT_HOP When sending a message to an external peer X, and the peer is one IP hop away from the speaker: ... the BGP speaker can use for the NEXT_HOP attribute an interface address of the internal peer router (or the internal router) through which the announced network is reachable for the speaker, provided that peer X shares a common subnet with this address.																																																																																																															
<table border="1"> <tr><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: untested</td><td>FreeBSD 10.3: untested</td></tr> <tr><td>Ubuntu 16.04: FAIL</td><td>Ubuntu 16.04: FAIL</td><td>Ubuntu 16.04: FAIL</td><td>Ubuntu 16.04: FAIL</td><td>Ubuntu 16.04: pass</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td></tr> <tr><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td></tr> <tr><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td></tr> <tr><td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td></tr> <tr><td>FreeBSD 12.3: untested</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td></tr> </table>																FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: pass	Ubuntu 16.04: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass																																																																	
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-17.2	RFC 4271, Sect. 5.1.3, p 26, NEXT_HOP														
SHOULD	NEXT_HOP - Otherwise, if the route being announced was learned from an external peer, the speaker can use in the NEXT_HOP attribute an IP address of any adjacent router (known from the received NEXT_HOP attribute) that the speaker itself uses for local route calculation, provided that peer X shares a common subnet with this address. This is a second form of "third party" NEXT_HOP attribute.														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL
ANVL-BGPPLUS-17.3	NEGATIVE RFC 4271, Sect 5.1.3, p 27, NEXT_HOP														
MUST	NEXT_HOP A route originated by a BGP speaker SHALL NOT be advertised to a peer using an address of that peer as NEXT_HOP. (Note : Here we test that DUT does not accept an Update Message advertising a route with next hop set to an interface address of DUT which is in the same subnet as the peer sending the Update)														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass





	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-18.3 MUST	RFC 4271, Sect. 5.1.4, p 27, MULTI_EXIT_DISC														
	MULTI_EXIT_DISC The MULTI_EXIT_DISC attribute received from a neighboring AS MUST NOT be propagated to other neighboring ASs.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested									
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested					
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-18.4 MUST	RFC 4271, Sect. 5.1.4, p 27-28, MULTI_EXIT_DISC														
	MULTI_EXIT_DISC A BGP speaker MUST IMPLEMENT a mechanism based on local configuration which allows the MULTI_EXIT_DISC attribute to be removed from a route. If a BGP speaker is configured to remove the MULTI_EXIT_DISC attribute from a route, then this removal MUST be done prior to determining the degree of preference of the route and performing route selection (Note : In this test, we test if DUT removes MED on configuration and treats the update as having lowest MED)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested									
	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested	FreeBSD 12.0: untested					
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-18.5 MAY	RFC 4271, Sect. 5.1.4, p 28, MULTI_EXIT_DISC														
	MULTI_EXIT_DISC An implementation MAY also (based on local configuration) alter the value of the MULTI_EXIT_DISC attribute received over an external link.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested									
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested					
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: unpredict	Ubuntu 18.04: unpredict	Ubuntu 18.04: unpredict	Ubuntu 18.04: unpredict	Ubuntu 18.04: FAIL
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL









	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-21.4 MUST	RFC 4271, Sect. 6, p 29, BGP Error Handling														
	BGP Error Handling When "the BGP4 Connection is closed" then before the invalid routes are deleted from the system advertises to its peers either withdraws for the routes marked as invalid, or the new best routes before the invalid routes are deleted from the system.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-21.5 MUST	NEGATIVE RFC 4271, Sect. 6, p 29, BGP Error Handling														
	BGP Error Handling Unless specified explicitly, the Data field of the NOTIFICATION message that is sent to indicate an error is empty.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-22.1 MUST	NEGATIVE RFC 4271, Sect. 6.1, p 30, Message Header error handling														
	Message Header Error Handling If the Marker field of the message header is not the expected one, then a synchronization error has occurred and the Error Subcode is set to Connection Not Synchronized.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				





	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-23.4	NEGATIVE RFC 4271, Sect. 6.2, p 32, OPEN message error handling														
MUST	Open Message Error Handling If one of the Optional Parameters in the OPEN message is not recognized, then the Error Subcode MUST be set to Unsupported Optional Parameters.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-25.1	NEGATIVE RFC 4271, Sect. 6.4, p 33, NOTIFICATION message error handling														
SHOULD	Notification Message Error Handling If a peer sends a NOTIFICATION message, and there is an error in that message, such as an unrecognized Error Code or Error Subcode, it should be noticed, logged locally, and brought to the attention of the administration of the peer.														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL				
ANVL-BGPPLUS-26.1	RFC 4271, Sect. 6.7, p 34, Cease														
MAY	Error Code Cease In absence of any fatal errors (that are indicated in this section), a BGP peer may choose at any given time to close its BGP4 Connection by sending the NOTIFICATION message with Error Code Cease.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL				





	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2															
ANVL-BGPPLUS-28.1 MUST	NEGATIVE RFC 4271, Sect. 6.2, p 30, OPEN message error handling RFC 4271, Sect. 7, p 35, BGP Version Negotiation																													
BGP Version Negotiation If the version number contained in the Version field of the received OPEN message is not supported then Data field contains a 2-octet unsigned integer, which indicates the largest locally supported version number less than the version the remote BGP peer bid. If an open attempt fails with an Error Code OPEN Message Error, and an Error Subcode Unsupported Version Number, then if the two peers do support one or more common versions, then they will rapidly determine the highest common version.																														
FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested																										
Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested																			
FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested																						
FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested															
Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass																			
FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass																			
ANVL-BGPPLUS-29.1 MUST	RFC 4271, Sect. 8.2.2, p 52, BGP Finite State machine																													
BGP Finite State Machine At Idle state in response to the Manual Start event the local system initiates a TCP connection to other BGP peer.																														
FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested																										
Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested																			
FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested																						
FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested															
Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass															
FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass																			
ANVL-BGPPLUS-29.2 MUST	RFC 4271, Sect. 8.2.2, p 52, BGP Finite State machine																													
BGP Finite State Machine At idle state in response to the Manual Start event the local system starts the ConnectRetry timer with initial value.																														
FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested																										
Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested																			
FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested																						
FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested															
Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass															
FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass																			



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-29.3 MUST	RFC 4271, Sect. 8.2.2, p 52, BGP Finite State machine														
	BGP Finite State Machine At idle state in response to the Manual Start event the local system listens for a connection that may be initiated by the remote BGP peer														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-29.4 MUST	RFC 4271, Sect. 8.2.2, p 54, BGP Finite State machine														
	BGP Finite State Machine In response to the ConnectRetryTimer_Expires event, the local system: - restarts the ConnectRetryTimer														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-29.5 MAY	RFC 4271, Sect. 8.2.2, p 58, BGP Finite State machine														
	BGP Finite State Machine While in Active state in response to the ConnectRetry timer expired event : - continues to listen for TCP connection that may be initiated by remote BGP peer														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-29.6 MAY	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-29.6 MUST	RFC 4271, Sect. 8.2.2, p 62, BGP Finite State machine														
	BGP Finite State Machine Start event is ignored in the OpenSent state.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
ANVL-BGPPLUS-29.7 MUST	NEGATIVE RFC 4271, Sect. 8.2.2, p 63, BGP Finite State machine														
	BGP Finite State Machine In state OpenSent if the Hold Timer expires, the local system sends NOTIFICATION message with Error Code Hold Timer Expired.														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: unpredict	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested
	Ubuntu 16.04: pass	Ubuntu 16.04: unpredict	Ubuntu 16.04: pass	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: unpredict	FreeBSD 12.0: unpredict	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested				
ANVL-BGPPLUS-29.8 MUST	RFC 4271, Sect. 8.2.2, p 63, BGP Finite State machine														
	BGP Finite State Machine In OpenSent state if a TcpConnectionFails event is received, the local system: - closes the BGP4 Connection														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: unpredict				





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ANVL-BGPPLUS-29.15	RFC 4271, Sect. 8.2.2, p 71, BGP Finite State machine														
MUST	<p>BGP Finite State Machine</p> <p>In the Established state, if the KeepaliveTimer_Expires event occurs the local system:</p> <ul style="list-style-type: none"> - sends a KEEPALIVE message, and - restarts its KeepaliveTimer unless the negotiated HoldTime value is zero. 														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-29.16	NEGATIVE RFC 4271, Sect. 8.2.2, p 73, BGP Finite State machine														
MUST	<p>BGP Finite State Machine</p> <p>In the Established state, if the local system receives an UPDATE or KEEPALIVE message, it restarts its Hold Timer, if the negotiated Hold Time value is non-zero.</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-30.1	NEGATIVE RFC 4271, Sect. 9, p 74, UPDATE Message Handling														
MAY	<p>Update Message Handling</p> <p>An UPDATE message may be received only in the Established state.</p> <p>(Note : This test checks by sending Update Message immediately after TCP connection is established)</p>														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested							
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				



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ANVL-BGPPLUS-30.2	NEGATIVE RFC 4271, Sect. 9, p 74, UPDATE Message Handling														
MAY	Update Message Handling An UPDATE message may be received only in the Established state. (This test checks by sending Update Message in OpenConfirm state)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-31.1	NEGATIVE RFC 4271, Sect. 9.1.2, p 77 Phase 2: Route Selection														
SHOULD	Phase 2: Route Selection If the AS_PATH attribute of a BGP route contains an AS loop, the BGP route should be excluded from the Phase 2 decision function.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-31.2	RFC 4271, Sect. 9.1.2, p 78 Phase 2: Route Selection														
MUST	Phase 2: Route Selection Notice that even though BGP routes do not have to be installed in the Routing Table with the immediate next hop(s), implementations MUST take care that before any packets are forwarded along a BGP route, its associated NEXT_HOP address is resolved to the immediate (directly connected) next-hop address and this address (or multiple addresses) is finally used for actual packet forwarding.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass



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ANVL-BGPPLUS-31.3 MUST	RFC 4271, Sect. 9.1.2, p 77 Phase 2: Route Selection														
	Phase 2: Route Selection The local speaker MUST determine the immediate next-hop address from the NEXT_HOP attribute of the selected route (see Section 5.1.3). If either the immediate next hop or the IGP cost to the NEXT_HOP (where the NEXT_HOP is resolved through an IGP route) changes, Phase 2 Route Selection MUST be performed again.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-31.4 MUST	RFC 4271, Sect. 9.1.2, p 77, Phase 2: Route Selection														
	Phase 2: Route Selection The local speaker MUST determine the immediate next-hop address from the NEXT_HOP attribute of the selected route (see Section 5.1.3). If either the immediate next hop or the IGP cost to the NEXT_HOP (where the NEXT_HOP is resolved through an IGP route) changes, Phase 2 Route Selection MUST be performed again.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-31.5 SHOULD	RFC 4271, Sect. 9.1.2, p 78, Phase 2: Route Selection														
	Phase 2: Route Selection Unresolvable routes SHALL be removed from the Loc-RIB and the routing table. However, corresponding unresolvable routes SHOULD be kept in the Adj-RIBs-In (in case they become resolvable).														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				



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ANVL-BGPPLUS-32.1	MUST														
	NEGATIVE RFC 4271, Sect. 9.1.2.1, p 78, Route Resolvability Condition RFC 4271, Sect. 9.1.2.1, p 78-79, Route Resolvability Condition														
	Route Resolvability Condition 1. A route Rte1, referencing only the intermediate network address, is considered resolvable if the Routing Table contains at least one resolvable route Rte2 that matches Rte1's intermediate network address and is not recursively resolved (directly or indirectly) through Rte1. Mutually recursive routes (routes resolving each other or themselves), also fail the resolvability check. It is also important that implementations do not consider feasible routes that would become unresolvable if they were installed in the Routing Table even if their NEXT_HOPS are resolvable using the current contents of the Routing Table (an example of such routes would be mutually recursive routes).														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL				
ANVL-BGPPLUS-33.1	MUST														
	RFC 4271, Sect. 9.1.2.2, p 77-78, Breaking Ties (Phase 2)														
	Breaking Ties (Phase 2) a) Remove from consideration all routes which are not tied for having the smallest number of AS numbers present in their AS_PATH attributes. Note, that when counting this number, an AS_SET counts as 1, no matter how many ASs are in the set.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass





	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-34.1 SHOULD	RFC 4271, Sect. 9.1.4, p 81, Overlapping Routes														
	Overlapping Routes If a more specific route is later withdrawn, the set of destinations described by the overlap will still be reachable using the less specific route.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-34.2 MUST	RFC 4271, Sect. 9.1.4, p 81, Overlapping Routes														
	Overlapping Routes If both a less and a more specific route are accepted, then the Decision Process MUST install both the less and the more specific routes if it does not aggregate the two routes.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: unpredict
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-34.3 MUST	RFC 4271, Sect. 9.1.4, p 81 Overlapping Routes														
	Overlapping Routes In particular, a route that carries ATOMIC_AGGREGATE attribute MUST NOT be de-aggregated														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2																																																																																																
ANVL-BGPPLUS-35.1 MUST	RFC 4271, Sect. 9.2, p 81, Update-Send Process																																																																																																														
Update-Send Process When a BGP speaker receives an UPDATE message from an internal peer, the receiving BGP speaker SHALL NOT re-distribute the routing information contained in that UPDATE message to other internal peers																																																																																																															
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ANVL-BGPPLUS-36.1 MUST	RFC 4271, Sect. 9.2.1.1, p 83, Frequency of Route Advertisement,																																																																																																														
Frequency of Route Advertisement If new routes are selected multiple times while awaiting the expiration of MinRouteAdvertisementInterval, the last route selected SHALL be advertised at the end of MinRouteAdvertisementInterval.																																																																																																															
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ANVL-BGPPLUS-37.1 MUST	RFC 4271, Sect. 9.2.1.2, p 83 Frequency of Route Origination RFC 4271, Sect. 10, p 88 BGP Timers																																																																																																														
Frequency of Route Origination The parameter MinASOriginationIntervalTimer determines the minimum amount of time that must elapse between successive advertisements of UPDATE messages that report changes within the advertising BGP speaker's own autonomous systems. The suggested default value for the MinASOriginationIntervalTimer-Timer on EBGP4 Connections is 30 seconds.																																																																																																															
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Aggregating Routing Information - for any tuple X of type AS_SEQUENCE in the aggregated AS_PATH which precedes tuple Y in the aggregated AS_PATH, X precedes Y in each AS_PATH in the initial set which contains Y, regardless of the type of Y.																															
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Aggregating Routing Information - No tuple of type AS_SET with the same value SHALL appear more than once in the aggregated AS_PATH. An implementation may choose any algorithm which conforms to these rules. At a minimum a conformant implementation SHALL be able to perform the following algorithm that meets all of the above conditions:																															
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ANVL-BGPPLUS-38.11 SHOULD	RFC 4271, Sect. 9.2.2.2, p 86, Aggregating Routing Information,																														
Aggregating Routing Information If at least one of the routes to be aggregated has ATOMIC_AGGREGATE path attribute, then the aggregated route shall have this attribute as well.																															
FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested																											
Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested																
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-38.12 MUST	RFC 4271, Sect. 9.2.2.2, p 86, Aggregating Routing Information														
	Aggregating Routing Information Any AGGREGATOR attributes from the routes to be aggregated MUST NOT be included in the aggregated route. The BGP speaker performing the route aggregation MAY attach a new AGGREGATOR attribute (see Section 5.1.7).														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
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ANVL-BGPPLUS-39.1 MUST	RFC 4271, 9.3, p 86, Route Selection Criteria														
	Route Selection Criteria - If the local AS appears in the AS path of the new route being considered, then that new route can not be viewed as better than any other route (provided that the speaker is configured to accept such routes). If such a route were ever used, a routing loop could result.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
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	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-40.1 SHOULD	RFC 4271, Sect. Appendix - F.1, p 91, Multiple Networks Per Message,														
	Multiple Networks per Message The BGP protocol allows multiple address prefixes with the same Path attributes to be specified in one message														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2																																																																																																
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-41.7	draft-ietf-idr-error-handling-01.txt Section 2 Page 3 " Revision to Base Specification" UPDATE message error handling														
MUST	<p>Revised Update Message Error Handling According To Draft</p> <p>If any attribute has Attribute Flags that conflict with the Attribute Type Code, then the error SHOULD be logged, and the Attribute Flags MUST be reset to the correct value. The UPDATE message MUST continue to be processed.</p> <p>(NOTE:This test only checks for Processing This test checks for MULTI_EXIT_DISC (optional non-transitive) attribute and for Optional Bit)</p>														
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MUST	<p>Revised Update Message Error Handling According To Draft</p> <p>If any attribute has Attribute Flags that conflict with the Attribute Type Code, then the error SHOULD be logged, and the Attribute Flags MUST be reset to the correct value. The UPDATE message MUST continue to be processed.</p> <p>(NOTE:This test only checks for Processing This test checks for MULTI_EXIT_DISC (optional non-transitive) attribute and for transitive Bit)</p>														
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-41.9 MUST	draft-ietf-idr-error-handling-01.txt Section 2 Page 3 " Revision to Base Specification" UPDATE message error handling														
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-41.11	draft-ietf-idr-error-handling-01.txt Section 2 Page 3 " Revision to Base Specification" UPDATE message error handling														
MUST	<p>Revised Update Message Error Handling According To Draft</p> <p>If any attribute has Attribute Flags that conflict with the Attribute Type Code, then the error SHOULD be logged, and the Attribute Flags MUST be reset to the correct value. The UPDATE message MUST continue to be processed.</p> <p>(NOTE:This test only checks for Processing This test checks for ATOMIC AGGREGATE (well known discretionary) attribute and for Transitive Bit)</p>														
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MUST	<p>Revised Update Message Error Handling According To Draft</p> <p>If any attribute has Attribute Flags that conflict with the Attribute Type Code, then the error SHOULD be logged, and the Attribute Flags MUST be reset to the correct value. The UPDATE message MUST continue to be processed.</p> <p>(NOTE:This test only checks for Processing This test checks for ATOMIC AGGREGATE (well known discretionary) attribute and for Partial Bit)</p>														
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	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
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	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				
ANVL-BGPPLUS-41.14 MUST	draft-ietf-idr-error-handling-01.txt Section 2 Page 4 " Revision to Base Specification" UPDATE message error handling														
	Revised Update Message Error Handling According To Draft The approach of "treat-as-withdraw" MUST be used for the error handling of the cases described in Section 6.3 of [RFC4271] that specify a session reset and involve any of the following attributes: ORIGIN, AS_PATH, NEXT_HOP, MULTI_EXIT_DISC, and LOCAL_PREF. (Note: This test checks by sending incorrect length for ORIGIN attribute)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass				
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass				



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2																																																																																																
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<table border="1"> <tr> <td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: untested</td><td>FreeBSD 10.3: untested</td></tr> <tr> <td>Ubuntu 16.04: pass</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td></tr> <tr> <td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td></tr> <tr> <td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td></tr> <tr> <td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td></tr> <tr> <td>FreeBSD 12.3: untested</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td></tr> </table>																FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: pass	Ubuntu 16.04: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	Ubuntu 18.04: pass	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass																																																																			
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<table border="1"> <tr> <td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: pass</td><td>FreeBSD 10.3: untested</td><td>FreeBSD 10.3: untested</td></tr> <tr> <td>Ubuntu 16.04: pass</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td><td>Ubuntu 16.04: untested</td></tr> <tr> <td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: pass</td><td>FreeBSD 12.0: untested</td><td>FreeBSD 12.0: untested</td></tr> <tr> <td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: pass</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td><td>FreeBSD 12.2: untested</td></tr> <tr> <td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: untested</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td><td>Ubuntu 18.04: pass</td></tr> <tr> <td>FreeBSD 12.3: untested</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td><td>FreeBSD 12.3: pass</td></tr> </table>																FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: pass	Ubuntu 16.04: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	Ubuntu 18.04: pass	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass																																																																			
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Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass																																																																																																
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-41.20	draft-ietf-idr-error-handling-01.txt Section 2 Page 4 " Revision to Base Specification" UPDATE message error handling														
MUST	Revised Update Message Error Handling According To Draft The approach of "treat-as-withdraw" MUST be used for the error handling of the cases described in Section 6.3 of [RFC4271] that specify a session reset and involve any of the following attributes: ORIGIN, AS_PATH, NEXT_HOP, MULTI_EXIT_DISC, and LOCAL_PREF. (NOTE:ORIGIN attribute has an undefined value)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested						
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: unpredict	Ubuntu 18.04: pass	Ubuntu 18.04: unpredict	Ubuntu 18.04: pass	Ubuntu 18.04: unpredict
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-BGPPLUS-41.21	draft-ietf-idr-error-handling-01.txt Section 2 Page 4 " Revision to Base Specification" UPDATE message error handling														
MUST	Revised Update Message Error Handling According To Draft The approach of "treat-as-withdraw" MUST be used for the error handling of the cases described in Section 6.3 of [RFC4271] that specify a session reset and involve any of the following attributes: ORIGIN, AS_PATH, NEXT_HOP, MULTI_EXIT_DISC, and LOCAL_PREF. (NOTE:AS_PATH attribute is syntactically incorrect)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested						
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass	Ubuntu 18.04: unpredict	Ubuntu 18.04: pass	Ubuntu 18.04: unpredict	Ubuntu 18.04: pass	Ubuntu 18.04: unpredict
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass



	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2
ANVL-BGPPLUS-41.22 MUST	draft-ietf-idr-error-handling-01.txt Section 5.1 Page 6 " AGGREGATOR"														
	Revised Update Message Error Handling According To Draft The AGGREGATOR attribute SHALL be considered malformed if any of the following applies: Its length is not 6 (when the "4-octet AS number capability" is not advertised to, or not received from the peer [RFC4893]). Its length is not 8 (when the "4-octet AS number capability" is both advertised to, and received from the peer). An UPDATE message with a malformed AGGREGATOR attribute SHALL be handled using the approach of "attribute discard". NOTE: In this test "length is not 6"														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested										
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: pass	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: pass					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested
ANVL-BGPPLUS-41.23 MUST	draft-ietf-idr-error-handling-01.txt Section 2 Page 4 " Revision to Base Specification" UPDATE message error handling														
	Revised Update Message Error Handling According To Draft If an attribute appears more than once in an UPDATE message, then all the occurrences of the attribute other than the first one SHALL be discarded and the UPDATE message continue to be processed. (This test checks for EBGP)														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: untested						
	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL					
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: FAIL	FreeBSD 12.3: FAIL	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested
ANVL-BGPPLUS-41.24 MUST	draft-ietf-idr-error-handling-01.txt Section 2 Page 4 " Revision to Base Specification" UPDATE message error handling														
	Revised Update Message Error Handling According To Draft If an attribute appears more than once in an UPDATE message, then all the occurrences of the attribute other than the first one SHALL be discarded and the UPDATE message continue to be processed. (This test checks for IBGP)														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: untested				
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	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: FAIL					
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2																																																																																																
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ANVL-BGPPLUS-41.27 SHOULD	draft-ietf-idr-error-handling-01.txt Section 4 Page 5 "Operational Considerations"														
	<p>Revised Update Message Error Handling According To Draft</p> <p>When a malformed attribute is indeed detected over an IBGP session, we RECOMMEND that routes with the malformed attribute be identified and traced back to the ingress router in the network where the routes were sourced or received externally, and then a filter be applied on the ingress router to prevent the routes from being sourced or received. This will help maintain routing consistency in the network.</p> <p>(NOTE:ORIGIN, AS_PATH attribute field malformed Checking for filter applied or not on ingress router over an IBGP session to prevent route for which malformed attribute received earlier)</p>														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested										
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ANVL-BGPPLUS-41.28 MUST	draft-ietf-idr-error-handling-01.txt Section 3 Page 5 "Parsing of NLRI Fields" UPDATE message error handling														
	<p>Revised Update Message Error Handling According To Draft</p> <p>To facilitate the determination of the NLRI field in an UPDATE with a malformed attribute, the MP_REACH or MP_UNREACH attribute (if present) SHOULD be encoded as the very first path attribute in an UPDATE as recommended by [RFC4760bis]. An implementation, however, MUST still be prepared to receive these fields in any position.</p> <p>(NOTE:ANVL checks if DUT receive these field in any position MP_REACH_NLRI attribute encoded as last path attribute in the UPDATE message)</p>														
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	Release 2.0.2	Release 3.0.3	Release 4.0	Release 5.0.1	Release 6.0.3	Release 7.0.1	Release 7.1	Release 7.3	Release 7.5	Release 8.0	Release 8.2.2	Release 8.3	Release 8.4	Release 8.4.1	Release 8.4.2																																																																																																
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Update Message Error Handling According To New Draft Attribute Flag error log check Because of these potential issues, a BGP speaker MUST provide debugging facilities to permit issues caused by a malformed attribute to be diagnosed. At a minimum, such facilities MUST include logging an error listing the NLRI involved, and containing the entire malformed UPDATE message when such an attribute is detected. (Note : This test checks sending Wrong Attribute flags conflicting with Attribute type Code for well-known mandatory attribute, and error lists NLRI involved)																														
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