



	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-OSPF-1.1															
MUST	ANVL Setup Validation Test														
	Test Setup Validate OSPF Hello packet from DUT.														
	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-OSPF-1.6	RFC 2328 Section 12														
	Test Setup The collection of LSAs forms the link-state database. Each separate type of LSA has a separate function. Router-LSAs and network-LSAs describe how an area's routers and networks are interconnected. Summary-LSAs provide a way of condensing an area's routing information. AS-external-LSAs provide a way of transparently advertising externally-derived routing information throughout the Autonomous System. Note: ANVL Setup Validation Test														
	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-OSPF-2.1 MUST	RFC 1583, s13.3 p132 Next step in the flooding procedure (see also sA.3.5 p179) RFC 2328, s13.3 p148 Next step in the flooding procedure (see also sA.3.5 p199)														
	OSPF Flooding Validate Link State Update packet format.														
	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-OSPF-2.2 MUST	RFC 1583, s13.3 p131 Next step in the flooding procedure (see also s4.2 p35 and s12.1.3 p103) RFC 2328, s13.3 p148 Next step in the flooding procedure (see also s4.2 p41 and s12.1.3 p117)														
	OSPF Flooding AS external link advertisements are not flooded into/throughout stub areas.														
	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-OSPF-2.3 MUST	RFC 1583, s13.3 p132 Next step in the flooding procedure RFC 2328, s13.3 p149 Next step in the flooding procedure														
	OSPF Flooding If a neighbor is in a lesser state than Exchange, it does not participate in flooding.														
	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: 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-OSPF-2.4	RFC 1583, s13.3 p132 Next step in the flooding procedure RFC 2328, s13.3 p149 Next step in the flooding procedure														
MUST	OSPF Flooding Verify that advertisements for neighbors in state Exchange who appear on the Link State Request list are processed correctly														
	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							
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: 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: 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-OSPF-2.5	RFC 1583, s13 p127 The Flooding Procedure RFC 2328, s13 p144 The Flooding Procedure														
MUST	OSPF Flooding If a new advertisement was received from a neighbor such that the receiving interface is DR and sender is not BDR, then the advertisement must be flooded back out the receiving interface.														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: untested	FreeBSD 10.3: untested	FreeBSD 10.3: untested	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	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 12.0: 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: 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	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: FAIL	FreeBSD 12.3: pass	FreeBSD 12.3: unpredict	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-OSPF-2.6	RFC 1583, s13.3 p133 The Flooding Procedure RFC 2328, s13.3 p150 The Flooding Procedure														
MUST	OSPF Flooding Do not flood an advertisement back to an interface if it was received from the Designated Router or the Backup Designated Router														
	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							
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: 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: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	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: 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	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL	Ubuntu 18.04: FAIL	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: FAIL	FreeBSD 12.3: unpredict	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass



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ANVL-OSPF-2.7	RFC 1583, s13.3 p133 Next step in the flooding procedure RFC 2328, s13.3 p150 Next step in the flooding procedure														
MUST	OSPF Flooding Do not flood a new advertisement back onto the receiving interface if that interface is in state Backup														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: 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-OSPF-2.8	RFC 1583, s13.3 p133 Next step in the flooding procedure (see also s12.1.1 p101 and s14 p139) RFC 2328, s13.3 p150 Next step in the flooding procedure (see also s12.1.1 p116 and s14 p156)														
MUST	OSPF Flooding The LS age field must be incremented by InfTransDelay on every hop of the flooding procedure.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: 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-OSPF-2.9	RFC 1583, s13.3 p133-134 Next step in the flooding procedure (see also s7.3 p47 and s8.1 p51) RFC 2328, s13.3 p150-151 Next step in the flooding procedure (see also s7.3 p54 and s8.1 p58)														
MUST	OSPF Flooding The Designated Router and its Backup send Link State Update packets to the multicast address AllSPFRouters.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested	Ubuntu 16.04: 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-OSPF-2.10	RFC 1583, s13.3 p134 Next step in the flooding procedure (see also s8.1 p51) RFC 2328, s13.3 p151 Next step in the flooding procedure (see also s8.1 p58)														
MUST	OSPF Flooding All routers other than the Designated Router and its Backup send their Link State Update packets to the multicast address AllDRouters.														
	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-OSPF-2.11	NEGATIVE: RFC 1583, s13.3 p133 Next step in the flooding procedure NEGATIVE: RFC 2328, s13.3 p150 Next step in the flooding procedure														
SHOULD	OSPF Flooding DUT should ignore unexpected Link State Ack during adjacency establishment.														
	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-OSPF-2.12	RFC 2328, s13 p145 The flooding procedure														
MUST	OSPF Flooding When a received LSA instance is less recent than a router's current database copy, the router will respond by flooding back its DB copy.														
	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-OSPF-3.1	RFC 1583, s11.1 p96 Routing table lookup RFC 2328, s11.1 p111 Routing table lookup														
MUST	OSPF Routing Table Lookups This routing table entry then provides the outgoing interface and next hop router to use in forwarding the packet. (NOTE: Here we are testing the DUT forwards IP packet to the correct interface and next hop based on an entry in the OSPF routing 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: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: 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-OSPF-3.2	RFC 1583, s11.1 p96 Routing table lookup RFC 2328, s11.1 p111 Routing table lookup														
MUST	OSPF Routing Table Lookups In this case, the packet's IP destination is considered unreachable. Instead of being forwarded, the packet should be dropped and an ICMP destination unreachable message should be returned to the packet's source. (NOTE: Here we are testing the DUT sends an ICMP destination unreachable if there is no route to the destination.)														
	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-OSPF-3.3	RFC 1583, s11.1 p96 Routing table lookup RFC 2328, s11.1 p111 Routing table lookup																																																																																																														
SHOULD																																																																																																															
OSPF Routing Table Lookups If there is no matching routing table entry then the packet's IP destination is considered unreachable. Instead of being forwarded, the packet should then be discarded and an ICMP destination unreachable message should be returned to the packet's source. (NOTE: Here we are testing DUT sends an ICMP destination unreachable if there is no intra-area route for a packet destined for the router's configured area.)																																																																																																															
<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><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-OSPF-3.4	RFC 1583, s11.1 p96 Routing table lookup RFC 2328, s11.1 p96 Routing table lookup																																																																																																														
MUST																																																																																																															
OSPF Routing Table Lookups DUT forwards IP packets based on the most preferential path type.																																																																																																															
<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-OSPF-3.5	RFC 1583, s11.1 p96 Routing table lookup RFC 2328, s11.1 p111 Routing table lookup																																																																																																														
MUST																																																																																																															
OSPF Routing Table Lookups In this case, the "best match" is the routing table entry that provides the most specific (longest) match. (NOTE: here we are testing DUT forwards IP packets based on the most specific address/mask match.)																																																																																																															
<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-OSPF-3.7	STRESS: RFC 1583, s11.1 p98 Routing table lookup STRESS: RFC 2328, s11.1 p112 Routing table lookup														
MUST	OSPF Routing Table Lookups DUT stays up when receiving an excessive number of Link State Updates.														
	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-OSPF-3.8	RFC 2328, s16.2 p169 Calculating the Inter-area routes														
MAY	OSPF Routing Table Lookups Range summaries of an area may contain subnets in different areas provided that subnets belonging to other areas are not summarized.														
	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-OSPF-3.9	RFC 2328, s16.4.1 p175 External Path Preferences														
MUST	OSPF Routing Table Lookups Note that as a result of these rules, there may still be multiple paths of the highest preference. In this case, the path to use must be determined based on cost (NOTE: Here we are testing Intra-area backbone and inter-area paths are of equal preference. In this case, the path to use must be determined based on cost.)														
	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- OSPF-4.1 MAY	RFC 1583, s16.7 p157 Events generated as a result of routing table changes RFC 2328, s16.7 p177 Events generated as a result of routing table changes														
	OSPF Routing Table Changes New summary link advertisements are generated when the cost or path type of a routing table entry changes.														
	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
ANVL- OSPF-4.2 MUST	RFC 1583, s16.7 p157 Events generated as a result of routing table changes (see also s12.4.3 p120) RFC 2328, s16.7 p177 Events generated as a result of routing table changes (see also s12.4.3 p135)														
	OSPF Routing Table Changes New summary link advertisements are reflooded with LS Age = MaxAge when routing table entries are deleted or are no longer advertisable.														
	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: 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-OSPF-4.3 MUST	RFC 1583, s16.7 p158 Events generated as a result of routing table changes (see also s15 p141) RFC 2328, s16.7 p178 Events generated as a result of routing table changes (see also s15 p159)																														
OSPF Routing Table Changes If the entry indicates that the area border router is newly reachable, the corresponding virtual link is now operational. An InterfaceUp event should be generated for the virtual link, which will cause a virtual adjacency to begin to form. (NOTE: Here we are testing DUT attempts to bring up a virtual link when a changed routing table entry indicates that the endpoint of the virtual link is reachable.)																															
<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> </table>																FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested											
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: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass																
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: 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-OSPF-4.4 MUST	RFC 1583, s16.7 p158 Events generated as a result of routing table changes RFC 2328, s16.7 p178 Events generated as a result of routing table changes																														
OSPF Routing Table Changes If the entry indicates that the area border router is no longer reachable, the virtual link and its associated adjacency should be destroyed. This means an InterfaceDown event should be generated for the associated virtual link. (NOTE: Here we are testing the DUT brings down a virtual link when a changed routing table entry indicates that the virtual link endpoint is no longer reachable.)																															
<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> </table>																FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: untested											
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: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass																
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																				
Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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																				



	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-OSPF-4.5	RFC 1583, s16.7 p158 Events generated as a result of routing table changes RFC 2328, s16.7 p178 Events generated as a result of routing table changes																													
MUST																														
OSPF Routing Table Changes If the cost of the entry has changed, and there is a fully established virtual adjacency, a new router-LSA for the backbone must be originated. (NOTE: Here we are testing DUT generates new summary link advertisements when the cost of a path to a virtual link endpoint changes in the routing 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: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: 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-OSPF-5.1	RFC 1583, s16.1 p146 Calculating the shortest-path tree for an area RFC 2328, s16.1 p164 Calculating the shortest-path tree for an area																													
SHOULD																														
Intra-Area Shortest Path Calculation DUT should use the shortest of two or more paths (according to OSPF route distance metric) when forwarding packets.																														
	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-OSPF-5.2	RFC 1583, s16.1 p145 Calculating the shortest-path tree for an area RFC 2328, s16.1 p163 Calculating the shortest-path tree for an area																													
MUST																														
Intra-Area Shortest Path Calculation If the LSA LS age is equal to MaxAge, examine the next link in V's LSA. (NOTE: Here we are testing router links or network links advertisements with LS age = MaxAge are not used when building the shortest-path tree for an area.)																														
	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-OSPF-5.3	RFC 1583, s16.1 p145 Calculating the shortest-path tree for an area RFC 2328, s16.1 p163 Calculating the shortest-path tree for an area														
MUST	<p>Intra-Area Shortest Path Calculation If the LSA does not have a link back to vertex V, examine the next link in V's LSA. (NOTE: Here we are testing DUT does not calculate routes from an entry in the link state database if that entry has no path back to the DUT.)</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-OSPF-5.4	RFC 1583, s16.1 p146 Calculating the shortest-path tree for an area RFC 2328, s16.1 p164 Calculating the shortest-path tree for an area														
MUST	<p>Intra-Area Shortest Path Calculation Multiple sets of next hop values are calculated for intra-area routes when multiple equal-cost destinations to a network exist.</p>														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	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: 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: 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: FAIL				
ANVL-OSPF-5.5	RFC 1583, s16.1 p147 Calculating the shortest-path tree for an area RFC 2328, s16.1 p165 Calculating the shortest-path tree for an area														
MUST	<p>Intra-Area Shortest Path Calculation If intra-area routes exist to an AS boundary router in more than one area, the area providing the shortest path is always chosen.</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-OSPF-5.6 MUST	RFC 1583, s16.1 p147 Calculating the shortest-path tree for an area RFC 2328, s16.1 p165 Calculating the shortest-path tree for an area														
	Intra-Area Shortest Path Calculation If equal-cost intra-area routes exist to an AS boundary router in different areas, the area with largest OSPF Area ID is chosen.														
	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-OSPF-5.7 SHOULD	RFC 1583, s16.1 p147 Calculating the shortest-path tree for an area RFC 2328, s16.1 p165 Calculating the shortest-path tree for an area														
	Intra-Area Shortest Path Calculation In this case, the current routing table entry should be overwritten if and only if the newly found path is just as short and the current routing table entry's Link State Origin has a smaller Link State ID than the newly added vertex" LSA.														
	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-OSPF-5.8 MUST	RFC 1583, s16.1 p148 Calculating the shortest-path tree for an area RFC 2328, s16.1 p166 Calculating the shortest-path tree for an area														
	Intra-Area Shortest Path Calculation Multiple sets of next hop values are calculated for intra-area routes to stub networks when multiple equal-cost paths exist.														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	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: 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: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass	Ubuntu 18.04: pass
ANVL-OSPF-5.8 SHOULD	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: 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				
	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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-OSPF-5.9	RFC 1583, s16.1 p148-149 Calculating the shortest-path tree RFC 2328, s16.1 p166-167 Calculating the shortest-path tree														
MUST	<p>Intra-Area Shortest Path Calculation Otherwise D is smaller than the routing table cost. Overwrite the current routing table entry by setting the routing table entry's cost to D, and by setting the entry's list of next hops to the newly calculated set.</p> <p>(NOTE: Here we are testing stub network routing table entries are updated when a new path with smaller distance is calculated due to received routing information.)</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: 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-OSPF-6.1	RFC 1583, s16.2 p150 Calculating the inter-area routes RFC 2328, s16.2 p169 Calculating the inter-area routes														
MUST	<p>Use of Summaries For each summary-LSA: If the cost specified by the LSA is LSInfinity then examine the the next LSA. (NOTE: here we are testing summary link advertisements with cost LSInfinity are not used when calculating inter-area routes.)</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-OSPF-6.2	RFC 1583, s16.2 p150 Calculating the inter-area routes RFC 2328, s16.2 p169 Calculating the inter-area routes														
MUST	<p>Use of Summaries For each summary-LSA: if the LSA's LS age is equal to MaxAge, then examine the the next LSA. (NOTE: here we are testing summary link advertisements with LS age of MaxAge are not used when calculating inter-area routes.)</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-OSPF-6.3	RFC 1583, s16.2 p150 Calculating the inter-area routes RFC 2328, s16.2 p169 Calculating the inter-area routes														
MUST	Use of Summaries For each summary-LSA: If the LSA was originated by the calculating router itself, examine the next LSA. (NOTE: Here we are testing if a summary link advertisement was originated by the router itself, it is not used when calculating inter-area 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				
ANVL-OSPF-6.4	RFC 1583, s16.2 p151 Calculating the inter-area routes RFC 2328, s16.2 p169 Calculating the inter-area routes														
MUST	Use of Summaries If it is a Type 3 summary-LSA, and the collection of destinations described by the summary-LSA equals one of the router's configured area address ranges, and the particular area address range is active, then the summary-LSA should be ignored. (NOTE: Here we are testing a summary link advertisement is ignored if its destinations fall into one of the router's active configured address ranges.)														
	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-OSPF-6.5	RFC 1583, s16.2 p151 Calculating the inter-area routes RFC 2328, s16.2 p169 Calculating the inter-area routes														
MUST	Use of Summaries Ignore summary links advertisements originated by an area border router if there is no entry for that ABR in the routing 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: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: 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-OSPF-6.6	RFC 1583, s16.2 p151 Calculating the inter-area routes RFC 2328, s16.2 p169 Calculating the inter-area routes														
SHOULD	Use of Summaries Summary (inter-area) routes should be installed into the routing table in preference to existing external type 1 or type 2 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				
ANVL-OSPF-6.7	RFC 1583, s16.3 p152 Examining transit areas" summary links RFC 2328, s16.3 p170 Examining transit areas" summary links														
MUST	Use of Summaries The purpose of the calculation below is to examine the transit areas to see whether they provide any better (shorter) paths than the paths previously calculated in Sections 16.1 and 16.2. Any paths found that are better than or equal to previously discovered paths are installed in the routing table. (NOTE: Here we are testing the DUT uses a summary link advertisement in a transit area if it has a better cost route to a backbone area network than the virtual link)														
	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-OSPF-7.1	RFC 1583, s16.4 p155 Calculating AS external routes RFC 2328, s16.4 p173 Calculating AS external routes														
MUST	OSPF AS External Route Calculation If the cost specified by the LSA is LSInfinity, or if the LSA's LS age is equal to MaxAge, then examine the next LSA. (NOTE: Here we are testing the DUT does not use AS external link advertisements with either a metric of LSInfinity or an LS age of MaxAge.)														
	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-OSPF-7.2	RFC 1583, s16.4 p155 Calculating AS external routes RFC 2328, s16.4 p173 Calculating AS external routes														
MUST	OSPF AS External Route Calculation If the LSA was originated by the calculating router itself, examine the next LSA. (NOTE: Here we are testing the DUT does not use AS external link advertisements originated by the device itself.)														
	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-OSPF-7.3	RFC 1583, s16.4 p155 Calculating AS external routes RFC 2328, s16.4 p173 Calculating AS external routes														
MUST	OSPF AS External Route Calculation If no entries exist for router ASBR (i.e., ASBR is unreachable), do nothing with this LSA and consider the next in the list. (NOTE: Here we are testing the DUT does not use an AS external link advertisement if there is no routing table entry for the AS boundary router originating the advertisement.)														
	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-OSPF-7.4	RFC 1583, s16.4 p155 Calculating AS external routes RFC 2328, s16.4 p173 Calculating AS external routes														
MUST	OSPF AS External Route Calculation If the forwarding address is non-zero, look up the forwarding address in the routing table. The matching routing table entry must specify an intra-area or inter-area path; if no such path exists, do nothing with the LSA and consider the next in the list. (NOTE: Here we are testing DUT ignores an AS external link advertisement if there is no intra-area or inter-area routing table entry for the forwarding address.)														
	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-OSPF-11.1 MUST	RFC 2328, s2.3 p23 Use of external routing information														
	External Routing Information Use External routing information is flooded unaltered throughout the AS.														
	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-OSPF-12.1 MUST	RFC 2328, s4 p40 Functional Summary														
	OSPF Operations The router sends Hello packets to its neighbors, and in turn receives their Hello packets.														
	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-OSPF-12.2 MUST	RFC 2328, s4 p40 Functional Summary														
	OSPF Operations On broadcast networks, the router dynamically detects its neighboring routers by sending its Hello packets to the multicast address AllSPFRouters.														
	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



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ANVL-OSPF-12.4 MUST	RFC 2328, s4 p40 Functional Summary														
	OSPF Operations A router periodically advertises its state, which is also called link 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
ANVL-OSPF-12.5 MUST	RFC 2328, s4 p40 Functional Summary														
	OSPF Operations Link state is also advertised when a router's state changes.														
	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-OSPF-12.6 MUST	RFC 2328, s4.3 p42 Routing protocol packets														
	OSPF Operations The OSPF protocol runs directly over IP, using IP protocol 89.														
	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-OSPF-12.7 MUST	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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



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ANVL-OSPF-12.7 SHOULD	RFC 2328, s4.3 p42 Routing protocol packets														
	OSPF Operations Routing protocol packets should always be sent with the IP TOS field 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
ANVL-OSPF-12.8 SHOULD	RFC 2328, s4.3 p42 Routing protocol packets														
	OSPF Operations OSPF protocol packets should have their IP precedence field set to the value Internet Control.														
	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-OSPF-12.9 MUST	RFC 2328, s4.3 p43 Routing protocol packets														
	OSPF Operations Each LSA is tagged with the ID of the originating router and a checksum of its link state contents. This test is for Router-LSA.														
	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



	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-OSPF-12.10 MUST	RFC 2328, s4.3 p43 Routing protocol packets														
	OSPF Operations Each LSA is tagged with the ID of the originating router and a checksum of its link state contents. This test is for Network-LSA.														
	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-OSPF-12.11 MUST	RFC 2328, s4.3 p43 Routing protocol packets														
	OSPF Operations Each LSA is tagged with the ID of the originating router and a checksum of its link state contents. This test is for a Type-3 Summary LSA.														
	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-OSPF-13.1 MUST	RFC 2328, s7.1 p52 The Hello Protocol														
	Bringing up Adjacencies Bidirectional communication is indicated when the router sees itself listed in the neighbor's Hello Packet.														
	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-OSPF-13.2 MUST	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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-OSPF-13.2 MUST	RFC 2328, s7.1 p52 The Hello Protocol														
	Bringing up Adjacencies On broadcast networks, each router advertises itself by multicasting Hello Packets.														
	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-OSPF-13.3 MUST	RFC 2328, s7.1 p52 The Hello Protocol														
	Bringing up Adjacencies On broadcast networks, each router advertises itself by periodically multicasting Hello Packets.														
	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-OSPF-13.4 MUST	RFC 2328, s7.2 p53 The Synchronization of Databases														
	Bringing up Adjacencies Each router describes its database by sending a sequence of Database Description packets to its neighbor. This is an indirect test which verifies that the DUT recognizes the LSA headers contained in the Database Description packets received from ANVL.														
	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: 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-OSPF-13.5 SHOULD	RFC 2328, s7.2 p53 The Synchronization of Databases														
	Bringing up Adjacencies When the neighbor sees an LSA that is more recent than its own database copy, it makes a note that this newer LSA should be requested.														
	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-OSPF-13.6 SHOULD	RFC 2328, s7.2 p53 The Synchronization of Databases														
	Bringing up Adjacencies When the neighbor sees an LSA that is not more recent than its own database copy, it does not make a note that this LSA (which is not newer) should be requested.														
	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-OSPF-13.7 MUST	RFC 2328, s7.2 p53 The Synchronization of Databases														
	Bringing up Adjacencies Database Description Packets sent by the master (polls) are acknowledged by the slave through echoing of the sequence number.														
	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



	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-OSPF-13.8 MUST	RFC 2328, s7.2 p54 The Synchronization of Databases														
	Bringing up Adjacencies The master is the only one allowed to retransmit Database Description Packets.														
	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-OSPF-13.9 MUST	RFC 2328, s7.2 p54 The Synchronization of Databases														
	Bringing up Adjacencies The slave is not allowed to retransmit Database Description packets.														
	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-OSPF-13.10 MUST	RFC 2328, s7.2 p54 The Synchronization of Databases														
	Bringing up Adjacencies Each Database Description contains an indication that there are more packets to follow --- the M-bit.														
	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: 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



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ANVL-OSPF-13.11 MUST	RFC 2328, s7.2 p54 The Synchronization of Databases														
	Bringing up Adjacencies Database Exchange Process is over when a router has received and sent Database Description Packets with the M-bit off.														
	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-OSPF-13.12 MUST	RFC 2328, s7.3 p54 The Designated Router														
	Bringing up Adjacencies The Designated Router originates a network-LSA on behalf of the network.														
	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-OSPF-13.13 MUST	RFC 2328, s7.3 p54 The Designated Router														
	Bringing up Adjacencies If a router is not the DR, it does not generate a network-LSA for the network. This test is with DUT as BDR.														
	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



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ANVL-OSPF-13.14 MUST															
RFC 2328, s7.3 p54 The Designated Router															
Bringing up Adjacencies If a router is not the DR, it does not generate a network-LSA for the network. This test is with DUT as DR-Other															
FreeBSD 10.3: pass															
FreeBSD 10.3: untested															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
ANVL-OSPF-13.15 MUST															
RFC 2328, s7.3 p54 The Designated Router															
Bringing up Adjacencies The Link State ID for network-LSA is the IP interface address of the Designated Router.															
FreeBSD 10.3: pass															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
ANVL-OSPF-13.16 MUST															
RFC 2328, s7.4 p56 The Backup Designated Router															
Bringing up Adjacencies Backup Designated Router becomes Designated Router when the previous Designated Router fails.															
FreeBSD 10.3: pass															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															



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ANVL-OSPF-13.17 MUST	RFC 2328, s7.4 p56 The Backup Designated Router														
	Bringing up Adjacencies Each Hello Packet has a field that specifies the Backup Designated Router for the network.														
	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-OSPF-14.1 MUST	RFC 2328, s8.1 p58 Sending protocol packets														
	Protocol Packet Processing In the OSPF protocol packet headers version Number is set to 2, the version number of the protocol as documented in this specification.														
	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-OSPF-14.2 MUST	RFC 2328, s8.1 p59 Sending protocol packets														
	Protocol Packet Processing In OSPF protocol packet headers Router ID is set to the identity of the router itself (who is originating the packet).														
	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: 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



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ANVL-OSPF-14.3 MUST															
RFC 2328, s8.1 p59 Sending protocol packets															
Protocol Packet Processing Area ID in the OSPF packet header must be set to the ID of the area that the packet is being sent into. (This test checks Hello packet)															
FreeBSD 10.3: pass															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
ANVL-OSPF-14.4 MUST															
RFC 2328, s8.1 p59 Sending protocol packets															
Protocol Packet Processing The IP checksum of any OSPF packet is the standard IP 16-bit one's complement checksum of the entire OSPF packet, excluding the 64-bit authentication field. (This test checks the case of sending a Hello packet)															
FreeBSD 10.3: pass															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
ANVL-OSPF-14.5 MUST															
RFC 2328, s8.1 p59 Sending protocol packets s10.5 p96 Receiving Hello packets															
Protocol Packet Processing A router discards any received Hello packet with an invalid IP checksum i.e. which is not the standard IP 16-bit one's complement checksum of the entire OSPF packet, excluding the 64-bit authentication field.															
FreeBSD 10.3: pass															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															



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ANVL-OSPF-14.7 MUST	RFC 2328, s8.1 p60 Sending protocol packets														
	Protocol Packet Processing Retransmissions of Link State Update packets are ALWAYS sent directly to the neighbor.														
	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-OSPF-14.8 MUST	RFC 2328, s8.2 p62 Receiving protocol packets														
	Protocol Packet Processing The Received packet's IP source address is required to be on the same network as the receiving interface.														
	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-OSPF-14.9 MUST	NEGATIVE: RFC 2328, s8.2 p62 Receiving protocol packets														
	Protocol Packet Processing The Received packet's IP source address is required to be on the same network as the receiving interface.														
	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-OSPF-14.9 MUST	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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



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ANVL-OSPF-14.10 MUST	NEGATIVE: RFC 2328, s8.2 p62 Receiving protocol packets														
	Protocol Packet Processing The AuType specified in the packet must match the AuType specified for the associated area.														
	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-OSPF-15.1 MUST	RFC 2328, s9.5 p78 Sending Hello packets														
	Interface Data Structure The Hello Packet also indicates how often a neighbor must be heard from to remain active (RouterDeadInterval).														
	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-OSPF-15.2 MUST	RFC 2328, s9 p66 The Interface Data Structure														
	Interface Data Structure The Designated Router is initialized to 0.0.0.0, which indicates the lack of a Designated Router.														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	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: 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					



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ANVL-OSPF-15.3 MUST	RFC 2328, s9 p66 The Interface Data Structure														
	Interface Data Structure The Backup Designated Router is initialized to 0.0.0.0, indicating the lack of a Backup Designated Router														
	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-OSPF-15.4 MUST	RFC 2328, s9 p66 The Interface Data Structure														
	Interface Data Structure RxmtInterval is the number of seconds between Database Description packet retransmissions. This tests for Database Description packet retransmission in ExStart 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
ANVL-OSPF-15.5 MUST	RFC 2328, s9 p66 The Interface Data Structure														
	Interface Data Structure RxmtInterval is the number of seconds between Link State Request packet retransmissions. This tests for Database Description packet retransmission in Loading 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
ANVL-OSPF-15.6 MUST	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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



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ANVL-OSPF-15.6 MUST	RFC 2328, s9 p66 The Interface Data Structure														
	Interface Data Structure RxmtInterval is the number of seconds between LSA retransmissions, for adjacencies belonging to this interface.														
	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: 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-OSPF-15.7 MUST	RFC 2328, s9.1 p67 The Interface Data Structure														
	Interface Data Structure No protocol traffic at all will be sent or received on a down interface.														
	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-OSPF-15.8 MUST	RFC 2328, s9.1 p69 Interface states														
	Interface Data Structure In DR Other state, the router itself has not been selected Backup Designated Router either. The router forms adjacencies to both the Designated Router and the Backup Designated Router (if they exist).														
	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-OSPF-15.9 MUST	RFC 2328, s9.1 p70 DR Other state														
	Interface Data Structure In DR Other state, the router itself has not been selected Backup Designated Router either. The router forms adjacencies to both the Designated Router and the Backup Designated Router (if they exist).														



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ANVL-OSPF-15.9 MUST	RFC 2328, s9.1 p69 Interface states														
	Interface Data Structure In Backup state the router establishes adjacencies to all other routers attached to the network.														
	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-OSPF-15.10 MUST	RFC 2328, s9.1 p69 Interface states														
	Interface Data Structure In DR state Adjacencies are established to all other routers attached to the network.														
	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-OSPF-15.11 MUST	RFC 2328, s9.3 p73 The Interface state machine														
	Interface Data Structure When router is in Waiting state, if BackupSeen event occurs then router calculates the attached network's Backup Designated Router and Designated Router.														
	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-OSPF-15.12 MUST	RFC 2328, s9.4 p73 The interface state machine														
	Interface Data Structure When router is in Waiting state, if BackupSeen event occurs then router calculates the attached network's Backup Designated Router and Designated Router.														









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ANVL-OSPF-15.21 SHOULD	RFC 2328, s9.5 p78 Sending Hello packets														
	Interface Data Structure While sending a Hello packet into a stub area the E-bit of the Options field should be clear.														
	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-OSPF-15.22 SHOULD	RFC 2328, s9.5 p78 Sending Hello packets														
	Interface Data Structure While sending a Hello packet into a non-stub area the E-bit of the Options field should be 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: 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-OSPF-15.23 MUST	RFC 2328, s9.5 p78 Sending Hello packets														
	Interface Data Structure In order to ensure two-way communication between adjacent routers, the Hello packet contains the list of all routers on the network from which Hello Packets have been seen recently.														
	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-OSPF-15.24 MUST	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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





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ANVL-OSPF-15.29 MUST	RFC 2328, s9.5 p78 Sending Hello packets														
	Interface Data Structure On virtual links, Hello packets are sent as unicasts (addressed directly) to the other end of the virtual link)														
	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-OSPF-15.30 MUST	RFC 2328, s9.5 p78 Sending Hello packets														
	Interface Data Structure On virtual links, Hello packets are sent every HelloInterval 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: 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-OSPF-16.1 MUST	RFC 2328, s10 p80 The neighbor Data Structure														
	Neighbor Data Structure The Database Description Packet sent by slave is not allowed to retransmit.														
	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: 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



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ANVL-OSPF-16.2 MUST															
	RFC 2328, s10 p81 The neighbor Data Structure														
	Neighbor Data Structure The initialize(I), more (M) and master(MS) bits, Options field, and DD sequence number contained in the last Database Description packet received from the neighbor are used to determine whether the next Database Description packet received from the neighbor is a duplicate.														
	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-OSPF-17.1 MUST															
	RFC 2328, s10.1 p83 neighbor states														
	Neighbor States After the two routers discover their master/slave status, the state transitions to Exchange. (This test checks the case when DUT eventually becomes master)														
	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-OSPF-17.2 MUST															
	RFC 2328, s10.1 p83 neighbor states														
	Neighbor States After the two routers discover their master/slave status, the state transitions to Exchange. (This test checks the case when DUT eventually becomes slave)														
	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



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ANVL-OSPF-17.3 MUST		RFC 2328, s10.1 p86 neighbor states														
		Neighbor States Only one Database Description Packet is allowed outstanding at any one time. So when a router is slave it will always send a Database Description packet with the DD sequence number same as that of the Database Description packet received from master.														
		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: 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-OSPF-17.4 MUST		RFC 2328, s10.1 p86 neighbor states														
		Neighbor States Only one Database Description Packet is allowed outstanding at any one time. So when a router is master it will retransmit a Database Description packet unless slave sends a Database Description packet echoing the DD sequence number of the last sent Database Description packet.														
		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-OSPF-17.5 MAY		RFC 2328, s10.1 p86 neighbor states														
		Neighbor States In Exchange state Link State Request Packets may also be sent asking for the neighbor's more recent LSAs.														
		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-OSPF-18.1 SHOULD	RFC 2328, s10.3 p90-91 The neighbor state machine														
	Neighbor State Machine In Init state if the neighbor event 2-WayReceived is triggered and if it is determined that adjacency should be established with the neighbor, the neighbor state transitions to ExStart. Upon entering this state, the router increments the DD sequence number in the neighbor data structure.														
	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-OSPF-18.2 MUST	RFC 2328, s10.3 p91 The neighbor state machine														
	Neighbor State Machine The area link state database consists of the router-LSAs, network-LSAs and summary-LSAs contained in the area structure, along with the AS-external-LSAs contained in the global structure.														
	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-OSPF-18.3 MUST	RFC 2328, s10.3 p91 The neighbor state machine														
	Neighbor State Machine AS-external-LSAs are omitted from the Database summary list if the area has been configured as a stub area.														
	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-OSPF-18.7 MUST																													
RFC 2328, s10.3 p94 The neighbor state machine Neighbor State Machine The action for event BadLSReq is exactly the same as for the neighbor event SeqNumberMismatch. The (possibly partially formed) adjacency is torn down, and then an attempt is made at reestablishment. This test is for Exchange 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: 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-OSPF-18.8 MUST																													
RFC 2328, s10.3 p94 The neighbor state machine Neighbor State Machine The action for event BadLSReq is exactly the same as for the neighbor event SeqNumberMismatch. The (possibly partially formed) adjacency is torn down, and then an attempt is made at reestablishment. This test is for Loading 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: 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																					





	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-OSPF-20.4 MUST	RFC 2328, s10.5 p96 Receiving Hello Packets														
	Receiving Hello Packets If the receiving interface is attached to a stub area the E-bit must be clear in received Hello Packets and a mismatch causes processing to stop and the packet to be dropped.														
	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-OSPF-20.5 MUST	RFC 2328, s10.5 p96 Receiving Hello Packets														
	Receiving Hello Packets If the receiving interface is attached to a non-stub area the E-bit must be set in received Hello Packets and a mismatch causes processing to stop and the packet to be dropped.														
	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-OSPF-21.1 MUST	RFC 2328, s10.6 p100 Receiving Database Description Packets														
	Receiving DB Description Packets In ExStart state if the received Database Description packet has the I, M and MS bits set, the packet is empty, and the neighbor's Router ID is larger than the router's own then the router is slave, and it sets the neighbor data structure's DD sequence number to that specified by master.														
	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









	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-OSPF-22.5 SHOULD	RFC 2328, s10.7 p102 Receiving Link State Request Packets														
	Receiving LS Request Packets Link State Request Packets should be ignored when neighbor is in Init 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 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: 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-OSPF-22.6 SHOULD	RFC 2328, s10.7 p102 Receiving Link State Request Packets														
	Receiving LS Request Packets Link State Request Packets should be ignored when neighbor is in Down 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: unpredict	FreeBSD 12.0: unpredict	FreeBSD 12.0: unpredict	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-OSPF-22.7 SHOULD	RFC 2328, s10.7 p103 Receiving Link State Request Packets														
	Receiving LS Request Packets If an LSA specified in the Link State Request packet cannot be found in the database, something has gone wrong with the Database Exchange process, and neighbor event BadLsReq should be generated.														
	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 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: 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-OSPF-23.1 SHOULD	RFC 2328, s10.8 p103 Sending Database Description Packets														
	Sending DB Description Packets Interface MTU should be set to 0 in Database Description packets sent over virtual links.														
	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-OSPF-23.2 SHOULD	RFC 2328, s10.8 p103 Sending Database Description Packets														
	Sending DB Description Packets In Database Description packet the unrecognized bits in the Options field should be set to zero. (Note: we are only checking the option-bit 1 since it is currently reserved and not recognized)														
	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-OSPF-23.3 MUST	RFC 2328, s10.8 p103 Sending Database Description Packets														
	Sending DB Description Packets In state ExStart the router sends empty Database Description packets, with the initialize (I), more (M) and master (MS) bits 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: 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









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ANVL-OSPF-24.2 MUST	RFC 2328, s10.9 p105 Sending Link State Request Packets														
	Sending LS Request Packets Link state request list that have been requested, but not yet received, are packaged into Link State Request packets for retransmission at intervals of RxmtInterval.														
	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-OSPF-24.3 MUST	RFC 2328, s12.1.1 p116 LS age														
	Sending LS Request Packets LSAs are also aged as they are held in each router's database.														
	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-OSPF-24.4 MUST	RFC 2328, s12.1.1 p116 LS age														
	Sending LS Request Packets The age of an LSA is never incremented past MaxAge.														
	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



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ANVL-OSPF-24.5 MUST	RFC 2328, s12.1.1 p116 LS age														
	Sending LS Request Packets When an LSA's age first reaches MaxAge, it is reflooded.														
	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-OSPF-24.6 MUST	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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				
	RFC 2328, s12.1.1 p116 LS age														
	Sending LS Request Packets LSA of age MaxAge is finally flushed from the database when it is no longer needed to ensure database synchronization.														
	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				
ANVL-OSPF-24.7 MUST	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				
	RFC 2328, s12.1.1 p117 LS age														
	Sending LS Request Packets If the two instances of a LSA have identical LS sequence number and LS checksum, an instance of age MaxAge is then always accepted as most recent.														
ANVL-OSPF-24.7 MUST	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: 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: 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: FAIL				



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ANVL-OSPF-24.8 MUST	RFC 2328, s12.1.1 p117 LS age														
	Sending LS Request Packets If the two instances of a LSA have identical LS sequence number and LS Checksum and none of them is of age MaxAge then if their ages differ by more than MaxAgeDiff, the instance having the smaller age is accepted as most recent.														
	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-OSPF-25.1 SHOULD	RFC 2328, s12.1.2 p117 Options														
	LSA Header The E-bit represents OSPF's ExternalRoutingCapability. This bit should be set in all LSAs associated with the backbone.														
	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-OSPF-25.2 SHOULD	RFC 2328, s12.1.2 p117 Options														
	LSA Header The E-bit represents OSPF's ExternalRoutingCapability. This bit should be set in all LSAs associated with (non-backbone) non-stub areas. (This test checks for Router-LSA)														
	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-OSPF-25.9 MUST	RFC 2328, s12.1.3 p117 LS type														
	LSA Header All LSA types defined by this memo, except the AS-external-LSAs (LS type = 5), are flooded throughout a single area only.														
	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-OSPF-25.10 MUST	RFC 2328, s12.1.4 p119 Link State ID														
	LSA Header When the LSA is describing a router (LS type = 1 or 4), the Link State ID is always the described router's OSPF Router ID.														
	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-OSPF-25.11 MUST	RFC 2328, s12.1.5 p119 Advertising Router														
	LSA Header The Advertising Router field specifies the OSPF Router ID of the LSA's originator.														
	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	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: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass



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ANVL-OSPF-25.12 MUST	RFC 2328, s12.1.5 p119 Advertising Router														
	LSA Header For router-LSAs, the Advertising Router field is identical to the Link State ID field.														
	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-OSPF-25.13 MUST	RFC 2328, s12.1.5 p120 Advertising Router														
	LSA Header Summary-LSAs are originated by area border routers.														
	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-OSPF-25.14 MUST	RFC 2328, s12.1.6 p120 LS sequence number														
	LSA Header A router uses InitialSequenceNumber the first time it originates any LSA. (This test checks for Router-LSAs)														
	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
ANVL-OSPF-25.15 MUST	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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				







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ANVL-OSPF-25.21 MUST																													
RFC 2328, s12.1.6 p120 LS sequence number																													
LSA Header A router uses InitialSequenceNumber the first time it originates any LSA. Afterwards, the LSA's sequence number is incremented each time the router originates a new instance of the LSA. (This test checks for Type-4 Summary-LSA)																													
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															
Ubuntu 16.04: pass		Ubuntu 16.04: 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: 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: 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: 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: pass															
ANVL-OSPF-25.22 MUST																													
RFC 2328, s12.1.6 p120 LS sequence number																													
LSA Header When an attempt is made to increment the sequence number past the maximum value of N - 1 (0x7fffffff; also referred to as MaxSequenceNumber), the current instance of the LSA must first be flushed from the routing domain.																													
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: FAIL		Ubuntu 16.04: FAIL		Ubuntu 16.04: FAIL		Ubuntu 16.04: FAIL															
FreeBSD 12.0: untested		FreeBSD 12.0: untested		FreeBSD 12.0: untested		FreeBSD 12.0: pass		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: FAIL		FreeBSD 12.2: pass															
Ubuntu 18.04: 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															
FreeBSD 12.3: untested		FreeBSD 12.3: 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-OSPF-25.23 MUST																													
RFC 2328, s12.1.6 p120 LS sequence number																													
LSA Header As soon as this flooding of a LSA with LS sequence number MaxSequenceNumber has been acknowledged by all adjacent neighbors, a new instance can be originated with sequence number of InitialSequenceNumber.																													
FreeBSD 10.3: FAIL		FreeBSD 10.3: FAIL		FreeBSD 10.3: FAIL		FreeBSD 10.3: FAIL		FreeBSD 10.3: untested		FreeBSD 10.3: untested		FreeBSD 10.3: untested		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: untested															
FreeBSD 12.0: untested		FreeBSD 12.0: untested		FreeBSD 12.0: untested		FreeBSD 12.0: pass		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: FAIL		FreeBSD 12.2: pass															
Ubuntu 18.04: 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															
FreeBSD 12.3: untested		FreeBSD 12.3: 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-OSPF-25.27 MUST	RFC 2328, s12.1.7 p121 LS checksum														
	LSA Header The LSA header also contains the length of the LSA in bytes; subtracting the size of the LS age field (two bytes) yields the amount of data to checksum. (This test checks for Type-4 Summary-LSA.)														
	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-OSPF-25.28 SHOULD	RFC 2328, s12.1.7 p121 LS checksum														
	LSA Header The LS checksum field cannot take on the value of zero; the occurrence of such a value should be considered a checksum failure.														
	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-OSPF-26.1 MUST	RFC 2328, s12.2 p122 The link state database														
	LS Database An LSA is deleted from a router's database when it has been overwritten by a newer instance during the flooding process. (This test checks for Router-LSA)														
	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-OSPF-26.14 MUST															
RFC 2328, s12.2 p122 The link state database															
LS Database An LSA is deleted from a router's database when the LSA ages out and is flushed from the routing domain. (This test is for Type-5 AS External-LSA)															
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-OSPF-27.1 MUST															
RFC 2328, s12.4 p123 Originating LSAs															
LSA Origination Destinations are advertised one at a time so that the change in any single route can be flooded without reflooding the entire collection of routes. This test is for Type-3 Summary-LSA.															
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-OSPF-27.2 MUST															
RFC 2328, s12.4 p123 Originating LSAs															
LSA Origination During the flooding procedure, many LSAs can be carried by a single Link State Update packet. This test verifies whether the DUT recognizes multiple LSAs residing in a single Link State Update packet.															
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				



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ANVL-OSPF-27.3 MUST	RFC 2328, s12.4 p124 Originating LSAs														
	LSA Origination Whenever a new instance of an LSA is originated, its LS sequence number is incremented, its LS age is set to 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	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 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: 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-OSPF-27.4 MAY	RFC 2328, s12.4 p125 Originating LSAs														
	LSA Origination A change in an interface's state may mean that it is necessary to produce a new instance of the router-LSA.														
	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: unpredict	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-OSPF-27.5 SHOULD	RFC 2328, s12.4 p125 Originating LSAs														
	LSA Origination If an attached network's Designated Router gets changed a new router-LSA should be originated.														
	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 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: 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-OSPF-27.6 SHOULD	RFC 2328, s12.4 p125 Originating LSAs														
	LSA Origination When Designated Router changes and if the router itself is now the Designated Router, a new network-LSA should be produced.														
	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: FAIL	FreeBSD 12.2: FAIL	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested						
ANVL-OSPF-27.7 SHOULD	RFC 2328, s12.4 p125 Originating LSAs														
	LSA Origination If the router itself is no longer the Designated Router, any network-LSA that it might have originated for the network should be flushed from the routing domain.														
	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: pass	FreeBSD 12.2: pass	FreeBSD 12.2: untested									
ANVL-OSPF-27.8 MAY	RFC 2328, s12.4 p125 Originating LSAs														
	LSA Origination If one of the neighboring routers changes to the FULL state then this may mean that it is necessary to produce a new instance of the router-LSA.														
	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: 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: 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: 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-OSPF-27.18 MUST	RFC 2328, s12.4 p125 Originating LSAs														
	LSA Origination In case of an area border router an inter-area route has been deleted in the routing table. This never causes a new instance of a summary-LSA (for this route) to be originated in the attached backbone area.														
	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: 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-OSPF-27.19 MUST	RFC 2328, s12.4 p126 Originating LSAs,														
	LSA Origination If the router becomes newly attached to an area it must then originate summary-LSAs into the newly attached area for all intra-area and inter-area routes in the router's routing 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: pass	Ubuntu 16.04: pass	Ubuntu 16.04: 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-OSPF-27.20 MAY	RFC 2328, s12.4 p126 Originating LSAs														
	LSA Origination When the state of one of the router's configured virtual links changes, it may be necessary to originate a new router-LSA into the virtual link's Transit area, as well as originating a new router-LSA into the backbone. This test is for DUT which is ABR between backbone and non-backbone areas.														
	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: 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-OSPF-27.21 MUST	RFC 2328, s12.4.1 p127 Router-LSAs														
	LSA Origination A router also indicates whether it is an area border router, by setting the appropriate bits (bit B, respectively) in its router-LSAs.														
	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-OSPF-27.22 SHOULD	RFC 2328, s12.4.1 p127 Router-LSAs														
	LSA Origination Bit B should be set whenever the router is actively attached to two or more areas, even if the router is not currently attached to the OSPF backbone area.														
	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-OSPF-27.23 MUST	RFC 2328, s12.4.1 p128 Router-LSAs														
	LSA Origination The router sets bit V in its router-LSA for Area A if and only if the router is the endpoint of one or more fully adjacent virtual links having Area A as their Transit area.														
	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



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ANVL-OSPF-27.24 MUST															
RFC 2328, s12.4.1 p129 Router-LSAs,															
LSA Origination If the router wishes to build a router-LSA for Area A then for each interface if the attached network does not belong to Area A, no links are added to the LSA.															
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-OSPF-27.25 MUST															
RFC 2328, s12.4.1.3 p131 Describing virtual links															
LSA Origination For virtual links, a link description is added to the router-LSA only when the virtual neighbor is fully adjacent.															
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-OSPF-27.26 SHOULD															
RFC 2328, s12.4.2 p134 Network-LSAs															
LSA Origination A router that has formerly been the Designated Router for a network, but is no longer, should flush the network-LSA that it had previously originated.															
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				



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MUST ANVL-OSPF-27.28	RFC 2328, s12.4.3. p136 Summary-LSAs														
	LSA Origination If for a route the area associated with this set of paths is the Area A itself, do not generate a summary-LSA for the route for advertising into Area A.														
	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
MUST ANVL-OSPF-27.29	RFC 2328, s12.4.3. p136 Summary-LSAs														
	LSA Origination If for a route the area associated with the set of paths is not Area A but the next hops associated with this set of paths belong to Area A itself, do not generate a summary-LSA for the route for advertising into Area A.														
	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
SHOULD ANVL-OSPF-27.30	RFC 2328, s12.4.3. p136 Summary-LSAs														
	LSA Origination If the destination of a route is an AS boundary router, a summary-LSA should be originated if and only if the routing table entry describes the preferred path to the AS boundary router. If so, a Type 4 summary-LSA is originated for the destination.														
	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



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MUST ANVL-OSPF-27.31	RFC 2328, s12.4.3. p136 Summary-LSAs														
	LSA Origination While originating summary-LSAs for networks reachable by inter-area routes at most a single Type 3 summary-LSA is originated for each area address range.														
	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
MUST ANVL-OSPF-27.32	RFC 2328, s12.4.4 p139 AS-external-LSAs														
	LSA Origination A default route for the Autonomous System can be described in an AS-external-LSA by setting the LSA's Link State ID to DefaultDestination (0.0.0.0).														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	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: FAIL	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
MUST ANVL-OSPF-28.1	RFC 2328, s13 p143 The Flooding Procedure														
	Flooding Procedure To make the flooding procedure reliable, each LSA must be acknowledged separately. Acknowledgments are transmitted in Link State Acknowledgment packets.														
	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





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ANVL-OSPF-28.5 MUST	RFC 2328, s13 p144 The Flooding Procedure,														
	Flooding Procedure If the LSA's LS age is equal to MaxAge, and there is currently no instance of the LSA in router's link state database, and none of router's neighbors are in state Exchange or Loading send direct Acknowledgement packet to the sending neighbor and discard the LSA.														
	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-OSPF-28.6 MUST	RFC 2328, s13 p144 The Flooding Procedure														
	Flooding Procedure If there is already a database copy, and if the database copy was received via flooding and installed less than MinLSArrival seconds ago, discard the new LSA (without acknowledging it).														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: unpredict	FreeBSD 10.3: unpredict	FreeBSD 10.3: unpredict	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: pass	Ubuntu 16.04: pass	Ubuntu 16.04: unpredict	Ubuntu 16.04: FAIL	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	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: unpredict	FreeBSD 12.0: unpredict	FreeBSD 12.0: unpredict	FreeBSD 12.0: unpredict	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: 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: unpredict	Ubuntu 18.04: FAIL	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	FreeBSD 12.3: untested	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-OSPF-28.7 MUST	RFC 2328, s13 p144 The Flooding Procedure														
	Flooding Procedure If there is no database copy or the received LSA is more recent than the database copy and the database copy was installed more than MinLSArrival seconds ago, immediately flood the new LSA out some subset of the router's interfaces.														
	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: unpredict	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass



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ANVL-OSPF-28.8	RFC 2328, s13 p144 The Flooding Procedure														
MUST	Flooding Procedure When a new instance of a LSA is installed in database, a router possibly acknowledges the receipt of the LSA by sending a Link State Acknowledgment packet on the receiving interface.														
	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-OSPF-28.9	RFC 2328, s13 p145 The Flooding Procedure,														
MUST	Flooding Procedure When the received LSA is at most as recent as the database copy of that LSA then if there is an instance of the LSA on the sending neighbor's Link State Request list, generate the neighbor event BadLSReq.														
	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-OSPF-28.10	RFC 2328, s13 p145 The Flooding Procedure														
SHOULD	Flooding Procedure If the received LSA is the same instance as the database copy and is listed in the Link state retransmission list for the receiving adjacency, the router itself is expecting an acknowledgment for this LSA. The router should remove the LSA from the Link state retransmission list.														
	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-OSPF-28.11 MUST															
RFC 2328, s13 p145 The Flooding Procedure															
Flooding Procedure If the database copy has LS age equal to MaxAge and LS sequence number equal to MaxSequenceNumber, simply discard the received LSA without acknowledging it.															
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: 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: 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: 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: 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-OSPF-29.1 MUST															
RFC 2328, s13.1 p145 Determining which LSA is newer															
Newer LSA Determination The LSA having the newer LS sequence number is more recent.															
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: 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: 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-OSPF-30.1 MUST															
RFC 2328, s13.3 p149 Next step in the Flooding Procedure															
Flooding Procedure Next Step If the adjacency is not yet full and there is an instance of new LSA in Link State request list and if the new LSA is more recent delete the LSA from the Link state request list.															
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: 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: 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-OSPF-30.2 MUST															
RFC 2328, s13.3 p150 Sending protocol packets															
Flooding Procedure Next Step On broadcast network, the Link State Update packets are multicast but Link State Update packets carrying retransmissions are always sent directly to the neighbor.															
FreeBSD 10.3: pass	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-OSPF-31.1 MUST															
RFC 2328, s13.4 p151 Receiving self-originated LSAs															
Self-Originated LSA Receipt A self-originated LSA is detected when the LSA's Advertising Router is equal to the router's own Router ID and in most cases (when the LS sequence number of the received LSA is greater than that of the current instance), the router must then advance the LSA's LS sequence number one past the received LS sequence number, and originate a new instance of the LSA.															
FreeBSD 10.3: pass	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-OSPF-31.2 MUST															
RFC 2328, s13.4 p151 Receiving self-originated LSAs															
Self-Originated LSA Receipt A self-originated LSA is detected when the LSA is a network-LSA and its Link State ID is equal to one of the router's own IP interface addresses. In this case the LSA is flushed from the routing domain.															
FreeBSD 10.3: pass	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				





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ANVL-OSPF-32.1 MUST	RFC 2328, s13.5 p152-153 Sending Link State Acknowledgment packets														
	Sending LSA Packets If the new LSA has been flooded back out receiving interface no acknowledgement is sent.														
	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-OSPF-32.2 MUST	RFC 2328, s13.5 p152-153 Sending Link State Acknowledgment packets														
	Sending LSA Packets If the new LSA is more recent than database copy, but was not flooded back out receiving interface and if the router is in state Backup then delayed acknowledgement is sent if advertisement is received from Designated Router, otherwise nothing is done.														
	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-OSPF-32.3 MUST	RFC 2328, s13.5 p152-153 Sending Link State Acknowledgment packets														
	Sending LSA Packets If the new LSA is more recent than database copy, but was not flooded back out receiving interface and if the receiving router is not in state Backup then delayed acknowledgement is sent. (This test checks the case when router state is DR Other)														
	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



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ANVL-OSPF-32.4 MUST		RFC 2328, s13.5 p152-153 Sending Link State Acknowledgment packets													
		Sending LSA Packets If the new LSA is more recent than database copy, but was not flooded back out receiving interface and if the receiving router is not in state Backup then delayed acknowledgement is sent. (This test checks the case when router state is DR)													
		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: 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
		Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-OSPF-32.5 MUST		RFC 2328, s13.5 p152-153 Sending Link State Acknowledgment packets													
		Sending LSA Packets If the new LSA is a duplicate, and was treated as implied acknowledgement and if the receiving router is in state Backup then delayed acknowledgement is sent if advertisement is received from Designated Router, otherwise nothing is done.													
		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	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
		Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass
ANVL-OSPF-32.6 MUST		RFC 2328, s13.5 p152-153 Sending Link State Acknowledgment packets													
		Sending LSA Packets If the new LSA is a duplicate, and was treated as implied acknowledgement and if the receiving router is not in state Backup then no acknowledgement is sent. (This test checks the case when router state is DR Other)													
		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	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
		Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass





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ANVL-OSPF-33.1 MUST															
RFC 2328, s13.7 p156 Receiving link state acknowledgments															
LSA Receipt If the acknowledgment is for the same instance that is contained on the Link state retransmission list, remove the item from the list.															
FreeBSD 10.3: pass															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
ANVL-OSPF-34.1 MUST															
RFC 2328, s15 p158 Virtual Links															
Virtual Links When an adjacency is established over a virtual link, the virtual link will be included in backbone router-LSAs.															
FreeBSD 10.3: pass															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
ANVL-OSPF-34.2 MUST															
RFC 2328, s15 p158 Virtual Links															
Virtual Links When an adjacency is established over a virtual link, then OSPF packets pertaining to the backbone area will flow over the adjacency.															
FreeBSD 10.3: pass															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															



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ANVL-OSPF-34.3 MUST	RFC 2328, s15 p158 Virtual Links														
	Virtual Links AS-external-LSAs are NEVER flooded over virtual adjacencies.														
	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							
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: 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
ANVL-OSPF-34.4 MUST	RFC 2328, s15 p159 Virtual Links														
	Virtual Links The cost of a virtual link is NOT configured. It is defined to be the cost of the intra-area path between the two defining area border routers.														
	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							
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: 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
ANVL-OSPF-34.5 SHOULD	RFC 2328, s15 p159 Virtual Links														
	Virtual Links When the cost of a virtual link changes, a new router-LSA should be originated for the backbone area.														
	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							
	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass	Ubuntu 16.04: 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: 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: unpredict	FreeBSD 12.3: unpredict	FreeBSD 12.3: unpredict	FreeBSD 12.3: predict



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ANVL-OSPF-34.6 MUST	RFC 2328, s15 p159 Virtual Links														
	Virtual Links In each endpoint's router-LSA for the backbone, the virtual link is represented as a Type 4 link whose Link ID is set to the virtual neighbor's OSPF Router ID and whose Link Data is set to the virtual interface's IP address. (This test checks the case of router between backbone area and a non-backbone area)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: unpredict	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	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-OSPF-34.7 MUST	RFC 2328, s15 p159 Virtual Links														
	Virtual Links In each endpoint's router-LSA for the backbone, the virtual link is represented as a Type 4 link whose Link ID is set to the virtual neighbor's OSPF Router ID and whose Link Data is set to the virtual interface's IP address. (This test checks the case of router between two non-backbone areas)														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: unpredict	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	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: unpredict	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: unpredict	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: unpredict
ANVL-OSPF-34.8 MUST	RFC 2328, s15 p159 Virtual Links														
	Virtual Links The time between link state retransmissions, RxmtInterval, is configured for a virtual link.														
	FreeBSD 10.3: FAIL	FreeBSD 10.3: FAIL	FreeBSD 10.3: unpredict	FreeBSD 10.3: FAIL	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: 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	Ubuntu 16.04: untested
	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: untested	FreeBSD 12.0: unpredict	FreeBSD 12.0: unpredict	FreeBSD 12.0: FAIL	FreeBSD 12.0: FAIL	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: 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	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: FAIL	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass	FreeBSD 12.3: pass



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ANVL-OSPF-35.1 MUST	RFC 2328, s16.2 p168 Calculating the inter-area routes														
	Interarea Route Calculation If the router has active attachments to multiple areas, only backbone summary-LSAs are examined.														
	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: 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-OSPF-36.1 MUST	RFC 2328, sA.1 p185 Encapsulation of OSPF packets														
	OSPF Packet Encapsulation To ensure that the OSPF packets sent to multicast addresses will not travel multiple hops, their IP TTL must be 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
ANVL-OSPF-36.2 SHOULD	RFC 2328, sA.1 p186 Encapsulation of OSPF packets														
	OSPF Packet Encapsulation All routers running OSPF should be prepared to receive packets sent to the address 224.0.0.5. Hello packets are always sent to this destination. (This test checks the case when router is in state DR Other)														
	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: 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





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ANVL-OSPF-36.6 MUST	RFC 2328, sA.1 p186 Encapsulation of OSPF packets														
	OSPF Packet Encapsulation The Backup Designated Router must be prepared to receive packets destined to the multicast address 224.0.0.6.														
	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
ANVL-OSPF-36.7 MUST	RFC 2328, sA.3.2 p194 The Hello packet														
	OSPF Packet Encapsulation If Router Priority set to 0, the router will be ineligible to become Backup Designated Router. (This test checks the case when router itself has Router Priority 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
ANVL-OSPF-36.8 MUST	RFC 2328, sA.3.2 p194 The Hello packeta														
	OSPF Packet Encapsulation If Router Priority set to 0, the router will be ineligible to become Backup Designated Router (This test checks the case when a neighbor has Router Priority 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: 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



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ANVL-OSPF-36.9 MUST															
RFC 2328, sA.3.2 p194 The Hello packet															
OSPF Packet Encapsulation If Router Priority set to 0, the router will be ineligible to become Designated Router (This test checks the case when router itself has Router Priority 0)															
FreeBSD 10.3: pass															
FreeBSD 10.3: untested															
Ubuntu 16.04: pass															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
Ubuntu 18.04: untested															
FreeBSD 10.3: pass															
FreeBSD 10.3: untested															
Ubuntu 16.04: untested															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
Ubuntu 18.04: untested															
FreeBSD 10.3: pass															
FreeBSD 10.3: untested															
Ubuntu 16.04: untested															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
Ubuntu 18.04: untested															
FreeBSD 10.3: pass															
FreeBSD 10.3: untested															
Ubuntu 16.04: untested															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: untested															
FreeBSD 12.3: untested															
Ubuntu 18.04: untested															
FreeBSD 10.3: pass															
FreeBSD 10.3: untested															
Ubuntu 16.04: untested															
FreeBSD 12.0: untested															
FreeBSD 12.2: untested															
Ubuntu 18.04: 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-OSPF-36.12 MUST	RFC 2328, sA.4.2 p206-207 Router-LSAs														
	OSPF Packet Encapsulation When bit V is set, the router is an endpoint of one or more fully adjacent virtual links having the described area as Transit area.														
	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
ANVL-OSPF-36.13 MUST	RFC 2328, sA.4.2 p208 Router-LSAs														
	OSPF Packet Encapsulation When connecting to an object that also originates an LSA (i.e., another router or a transit network) the Link ID is equal to the neighboring LSA's Link State ID.														
	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
ANVL-OSPF-36.14 MUST	RFC 2328, sA.4.2 p208 Router-LSAs														
	OSPF Packet Encapsulation For connections to stub networks, Link Data specifies the network's IP address mask.														
	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
ANVL-OSPF-36.15 MUST	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: 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



	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-OSPF-36.16 MUST	RFC 2328, sA.4.2 p208 Router-LSAs														
	OSPF Packet Encapsulation For connections to transit network Link Data specifies the router interface's IP address.														
	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-OSPF-36.17 MUST	RFC 2328, sA.4.4 p212 Summary-LSAs														
	OSPF Packet Encapsulation Type 3 summary-LSAs are used when the destination is an IP network.														
	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-OSPF-36.18 MUST	RFC 2328, sA.4.4 p212 Summary-LSAs														
	OSPF Packet Encapsulation When the destination is an AS boundary router, a Type 4 summary-LSA is used.														
	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-OSPF-36.19 MUST	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: untested	Ubuntu 18.04: 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-OSPF-37.1 MUST	RFC 2328, sB p217 Architectural Constants														
	Architectural Restraints MinLSInterval is the minimum time between distinct originations of any particular LSA. The value of MinLSInterval is set to 5 seconds.														
	FreeBSD 10.3: pass	FreeBSD 10.3: pass	FreeBSD 10.3: unpredict	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: unpredict	Ubuntu 16.04: pass	Ubuntu 16.04: unpredict	Ubuntu 16.04: pass	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	Ubuntu 16.04: unpredict	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: unpredict	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-OSPF-37.2 MUST	RFC 2328, sB p218 Architectural Constants														
	Architectural Restraints LSInfinity is the metric value indicating that the destination described by an LSA is unreachable. Used in summary-LSAs as an alternative to premature aging. It is defined to be the 24-bit binary value of all ones: 0xffffffff.														
	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 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: 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-OSPF-37.3 MUST	RFC 2328, sB p218 Architectural Constants														
	Architectural Restraints LSInfinity is the metric value indicating that the destination described by an LSA is unreachable. Used in AS-external-LSAs as an alternative to premature aging. It is defined to be the 24-bit binary value of all ones: 0xffffffff.														
	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 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: untested	FreeBSD 12.2: 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-OSPF-37.4 MUST	RFC 2328, sB p218 Architectural Constants														
	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	FreeBSD 12.3: untested	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-OSPF-37.4 MUST	RFC 2328, sB p218 Architectural Constants														
	Architectural Restraints InitialSequenceNumber is the value used for LS Sequence Number when originating the first instance of any LSA. Its value is the signed 32-bit integer 0x80000001.														
	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: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL	Ubuntu 16.04: FAIL
	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
ANVL-OSPF-38.1 MUST	RFC 2328, sD.3 p229 Cryptographic Authentication														
	Cryptographic Authentication When cryptographic authentication is used, the 64-bit Authentication field in the standard OSPF packet header is redefined as														
	<pre> 0 1 2 3 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 +---+---+---+---+---+---+---+---+---+---+---+---+---+ 0 KeyID Auth Data Len +---+---+---+ +---+---+---+---+---+---+---+---+---+---+---+---+---+ Cryptographic sequence number +---+---+---+ +---+---+---+---+---+---+---+---+---+---+---+---+---+ </pre>														
	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: pass	Ubuntu 16.04: pass	Ubuntu 16.04: pass
	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-OSPF-38.2 MUST	RFC 2328, sD.3 p229 Cryptographic Authentication														
	Cryptographic Authentication (6) The message digest is then calculated and appended to the OSPF packet. The authentication algorithm to be used in calculating the digest is indicated by the key itself. Input to the authentication algorithm consists of the OSPF packet and the secret key. When using MD5 as the authentication algorithm, the message digest calculation proceeds as follows: (a) The 16 byte MD5 key is appended to the OSPF packet. (b) Trailing pad and length fields are added, as specified in [Ref17]. (c) The MD5 authentication algorithm is run over the concatenation of the OSPF packet, secret key, pad and length fields, producing a 16 byte message digest (see [Ref17]). (d) The MD5 digest is written over the OSPF key (i.e., appended to the original OSPF packet). The digest is not counted in the OSPF packet's length field, but is included in the packet's IP length field. Any trailing pad or length fields beyond the digest are not counted or transmitted.														
	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-OSPF-38.3 MUST	RFC 2328, sD4.3 p233 Generating Cryptographic authentication														
	Cryptographic Authentication (2) The checksum field in the standard OSPF header is not calculated, but is instead 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				



	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-OSPF-38.4 MUST	RFC 2328, p243 Security Considerations														
	Cryptographic Authentication When using the Cryptographic authentication option, each router appends a "message digest" to its transmitted OSPF packets. Receivers then use the shared secret key and received digest to verify that each received OSPF packet is authentic.														
	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