ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
Type	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR	FRR
Commit ID	ab0c954	ab0c954	16e3267	16e3267	5753eb9	5753eb9	821cf0d	821cf0d	1a664f5	1a664f5	3e71b5d	3e71b5d
Commit Date	2017-01-16	2017-01-16	2017-01-19	2017-01-19	2017-02-23	2017-02-23	2017-02-24	2017-02-24	2017-03-07	2017-03-07	2017-04-02	2017-04-02
ANVL-ISIS-1.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.5 p49 Level 1 LAN IS to IS hello PDU											
	IS to IS Hello PDU Level 1 LAN IS to IS hello PDU must have 1. Intra-domain Routing Protocol Discriminator = 0x83 2. PDU type = 15 3. Version/Protocol ID extension = 1 4. Version = 1											
ANVL-ISIS-1.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.5 p49 Level 1 LAN IS to IS hello PDU											
	IS to IS Hello PDU Bit 6-8 of PDU Type (5th octet), Reserved (7th octet), bit 3-8 of Reserved/Circuit Type (9th octet) and 8th bit of Priority are reserved which are always set to zero in Level 1 LAN IS to IS hello PDU.											
ANVL-ISIS-1.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.5 p49 Level 1 LAN IS to IS hello PDU											
	IS to IS Hello PDU The valid ID Length field shall take any one of these following values: 1. An Integer between 1 and 8, inclusive, indicating an ID field of the corresponding length 2. The Value zero, which indicates a six octet ID, field length 3. The Value 255, which means a null ID field (i.e., zero length)											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-1.4 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.5 p49-50 Level 1 LAN IS to IS hello PDU											
	IS to IS Hello PDU In a LAN Level 1 IIH the Circuit Type must be either 1 or 3											
ANVL-ISIS-1.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.5 p50 Level 1 LAN IS to IS hello PDU RFC 1195 s5.3.1 p37-38 Level 1 LAN IS to IS hello PDU											
	IS to IS Hello PDU The valid Codes that must be present in the VARIABLE LENGTH FIELD of Level 1 LAN IS to IS hello PDU are: Area Address Protocols Supported IP Interface Address											
ANVL-ISIS-1.6 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 s4.4 p32 Maintaining Router Adjacencies s5.2 p34 Overview of IP-specific Information for IS-IS											
	IS to IS Hello PDU The Protocol supported field must be present in all IS-IS Hello Packets send by IP-only routers											
ANVL-ISIS-1.7 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	NEGATIVE : RFC 1195 s4.4 p32 Maintaining Router Adjacencies											
	IS to IS Hello PDU The Protocol Supported field must be present in all IS-IS Hello Packets send by IP-only routers											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-1.8 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.6 p51 Level 2 LAN IS to IS hello PDU											
	IS to IS Hello PDU Level 2 LAN IS to IS hello PDU must have 1. Intra-domain Routing Protocol Discriminator = 0x83 2. PDU type = 16 3. Version/Protocol ID extension = 1 4. Version = 1											
ANVL-ISIS-1.9 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.6 p51 Level 2 LAN IS to IS hello PDU											
	IS to IS Hello PDU Bit 6-8 of PDU Type(5th octet), Reserved(7th octet), bit 3-8 of Reserved/Circuit Type(9th octet) and 8th bit of Priority are reserved which are always set to zero in Level 2 LAN IS to IS hello PDU.											
ANVL-ISIS-1.10 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.6 p51 Level 2 LAN IS to IS hello PDU											
	IS to IS Hello PDU The valid ID Length field shall take any one of these following values: 1. An Integer between 1 and 8,inclusive,indicating an ID field of the corresponding length 2. The Value zero,which indicates a six octet ID, field length 3. The Value 255,which means a null ID field(ie. zero length)											
ANVL-ISIS-1.11 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.6 p51 Level 2 LAN IS to IS hello PDU											
	IS to IS Hello PDU In a LAN Level 2 IIH the Circuit Type must be either 2 or 3											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-1.12 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E)s9.6 p51-52 Level 2 LAN IS to IS hello PDU RFC 1195 s5.3.2 p38-39 Level 2 LAN IS to IS hello PDU											
	IS to IS Hello PDU The valid Codes that must be present in the VARIABLE LENGTH FIELD of Level 2 LAN IS to IS hello PDU are : Area Address Protocols Supported IP Interface Address											
ANVL-ISIS-1.13 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 s4.4 p32 Maintaining Router Adjacencies s5.2 p34 Overview of IP-specific Information for IS-IS											
	IS to IS Hello PDU The Protocol supported field must be present in all IS-IS Hello Packets send by IP-only routers											
ANVL-ISIS-1.14 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	NEGATIVE : RFC 1195 s4.4 p32 Maintaining Router Adjacencies											
	IS to IS Hello PDU The Protocol Supported field must be present in all IS-IS Hello Packets sent by IP-only routers											
ANVL-ISIS-1.19 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 s3.1 p15 Exchange of Routing information											
	IS to IS Hello PDU IP capable routers need to know what network layer protocols are supported by other routers in their area											
ANVL-ISIS-1.20 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 s4.2 p31 Multiple IP Addresses per Interface											
	IS to IS Hello PDU Each interface corresponding to the SNPA over which is transmitted can have maximum of 63 IP addresses											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-1.21 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 s3.1 p15 Exchange of Routing information											
	IS to IS Hello PDU IP capable routers need to know what network layer protocols are supported by other routers in their area											
ANVL-ISIS-1.22 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 s4.2 p31 Multiple IP Addresses per Interface											
	IS to IS Hello PDU Each interface corresponding to the SNPA over which is transmitted can have maximum of 63 IP addresses											
ANVL-ISIS-1.23 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 s4.2 p31 Multiple IP Addresses per Interface											
	IS to IS Hello PDU Each Interface corresponding to the SNPA over which a L1 LAN IIH PDU is transmitted can have a maximum of 63 IP Addresses											
ANVL-ISIS-1.24 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 s4.2 p31 Multiple IP Addresses per Interface											
	IS to IS Hello PDU Each Interface corresponding to the SNPA over which a L2 LAN IIH PDU is transmitted can have a maximum of 63 IP Addresses											
ANVL-ISIS-2.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.8 p54 Level 1 LSPDU											
	Link State PDU Test that the level 1 LSP must have Intradomaim Routing Protocol Discriminator = 0x83, PDU Type = 18, Version/Protocol ID extension (2nd octet) = 1 and Version (6th octet) = 1 in the Header											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-2.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.8 p54 Level 1 Link State PDU											
	Link State PDU Bit 6-8 of PDU Type (5th octet) and Reserved (7th octet) are reserved which are always set to zero in Level 1 Link State PDU											
ANVL-ISIS-2.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.8 p54-55 Level 1 Link State PDU											
	Link State PDU The valid ID Length field shall take any one of these following values: 1. An integer between 1 and 8 ,inclusive, indicating an ID field of coresponding length 2. The value zero, which indicates a six octet ID, field length 3. The value 255, which means a null ID field (i.e., zero length)											
ANVL-ISIS-2.4 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s9.8 p54-55 Level 1 Link State PDU RFC 1195 s5.3.4, p40-43 Level 1 Link State PDU											
	Link State PDU The valid codes that must be present in the VARIABLE LENGTH FIELD of level 1 link state PDU are: Area Addresses Intermediate system Neighbors Protocols Supported IP Interface Address IP internal Reachability Information											
ANVL-ISIS-2.11 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.9 p57 Level 2 LSPDU											
	Link State PDU Test that the level 2 LSP must have Intradomaim Routing Protocol Discriminator =0x83, PDU Type=20,Version/Protocol ID extension(3rd octet) = 1 and Version (6th octet) = 1 in the Header											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-2.12 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.9 p57 Level 2 Link State PDU											
	Link State PDU Bit 6-8 of PDU Type (5th octet) and Reserved (7th octet) are reserved which are always set to zero in Level 2 Link State PDU											
ANVL-ISIS-2.13 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.9 p57 Level 2 Link State PDU											
	Link State PDU The valid ID Length field shall take any one of these following values: 1. An integer between 1 and 8 ,inclusive, indicating an ID field of coresponding length 2. The value zero, which indicates a six octet ID, field length 3. The value 255, which means a null ID field (i.e., zero length)											
ANVL-ISIS-2.14 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s9.9 p57-59 Level 2 Link State PDU RFC 1195 s5.3.5,p43-48 Level 2 Link State PDU											
	Link State PDU The valid codes that must be present in the VARIABLE LENGTH FIELD of level 2 link state PDU are: Area Addresses Intermediate system Neighbors Protocols Supported IP Interface Address IP internal Reachability Information											
ANVL-ISIS-2.17 **MUST**	pass	pass	unpredict	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 S3.1 P15 Exchange of routing information											
	Link State PDU IS-IS requires that any codes in a received PDU that are not recognized are ignored and passed through unchanged											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-2.18 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 S3.1 P15 Exchange of routing information											
	Link State PDU IS-IS requires that any codes in a received PDU that are not recognized are ignored and passed through unchanged											
ANVL-ISIS-3.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.10 p60 Level 1 complete sequence numbers PDU											
	Sequence Numbers PDU Level 1 complete sequence number PDU must have Intra-domain Routing protocol Discriminator = 0x83, PDU Type = 24, Version/Protocol ID extension (3rd octet) = 1 and Version (6th octet) = 1 in the header											
ANVL-ISIS-3.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.10 p60 Level 1 Complete sequence number PDU											
	Sequence Numbers PDU Bit 6-8 of PDU Type (5th octet) and Reserved(7th octet) are reserved which are always set to zero in Level 1 complete sequence numbers PDU											
ANVL-ISIS-3.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.10 p57 Level 1 complete sequence numbers PDU											
	Sequence Numbers PDU The valid ID Length field in a Level 1 Complete Sequence Number PDU shall take any one of these following values: 1. An integer between 1 and 8, inclusive, indicating an ID field of coresponding length 2. The value zero, which indicates a six octet ID,field length 3. The value 255, which means a null ID field (i.e., zero length)											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-3.4 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.10 p60-61 Level 1 complete sequence numbers PDU RFC 1195 s5.3.6,p48-49 Level 1 complete sequence numbers PDU											
	`Sequence Numbers PDU` `The valid codes that must be present in the VARIABLE LENGTH FIELD of level 1 complete sequence numbers PDU are:` `1. LSP Entries` `2. Authentication Information`											
ANVL-ISIS-3.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.10 p61-62 Level 2 complete sequence numbers PDU											
	`Sequence Numbers PDU` `Level 2 complete sequence number PDU must have Intra-domain Routing protocol Discriminator = 0x83, PDU Type = 25, Version/Protocol ID extension (3rd octet) = 1 and Version (6th octet) = 1 in the header`											
ANVL-ISIS-3.6 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.11 p62 Level 2 Complete sequence number PDU											
	`Sequence Numbers PDU` `Bit 6-8 of PDU Type (5th octet) and Reserved(7th octet) are reserved which are always set to zero in Level 2 complete sequence numbers PDU`											
ANVL-ISIS-3.7 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.11 p61-62 Level 2 complete sequence numbers PDU											
	`Sequence Numbers PDU` `The valid ID Length field in a Level 2 Complete Sequence Number PDU shall take any one of these following values:` `1. An integer between 1 and 8, inclusive, indicating an ID field of coresponding length` `2. The value zero, which indicates a six octet ID, field length` `3. The value 255, which means a null ID field (i.e., zero length)`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-3.8 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.11 p62 Level 2 complete sequence numbers PDU RFC 1195 s5.3.7,p49 Level 2 complete sequence numbers PDU											
	Sequence Numbers PDU The valid codes that must be present in the VARIABLE LENGTH FIELD of level 2 complete sequence numbers PDU are: 1. LSP Entries 2. Authentication Information											
ANVL-ISIS-3.9 **MUST**	pass	unpredict	unpredict	pass	pass	unpredict	pass	unpredict	unpredict	pass	pass	unpredict
	ISO/IEC 10589(E) s9.12 p62-63 Level 1 partial sequence numbers PDU											
	Sequence Numbers PDU Level 1 partial sequence number PDU must have Intra-domain Routing protocol Discriminator=0x83, PDU Type=26, Version/Protocol ID extension (3rd octet)=1 and Version (6th octet)=1 in the header											
ANVL-ISIS-3.10 **MUST**	pass	pass	unpredict	pass	pass	unpredict	pass	pass	pass	pass	pass	unpredict
	ISO/IEC 10589:1992(E) s9.12 p63 Level 1 partial sequence number PDU											
	Sequence Numbers PDU Bit 6-8 of PDU Type (5th octet) and Reserved (7th octet) are reserved which are always set to zero in Level 1 partial sequence numbers PDU											
ANVL-ISIS-3.11 **MUST**	pass	pass	unpredict	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.12 p63 Level 1 partial sequence number PDU											
	Sequence Numbers PDU The valid ID Length field shall take any one of these following values: 1. An integer between 1 and 8 , inclusive, indicating an ID field of coresponding length 2. The value zero, which indicates a six octet ID,field length 3. The value 255, which means a null ID field (i.e., zero length)											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-3.12 **MUST**	pass	unpredict	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.12 p63 Level 1 partial sequence number PDU RFC 1195 s5.3.8,p49 Level 1 partial sequence number PDU											
	`Sequence Numbers PDU` `The valid codes that must be present in the VARIABLE LENGTH FIELD of` `level 1 partial sequence numbers PDU are:` `1. LSP Entries`											
ANVL-ISIS-3.13 **MUST**	pass	unpredict	pass	pass	pass	unpredict	pass	unpredict	unpredict	pass	pass	unpredict
	ISO/IEC 10589(E) s9.12 p64-65 Level 2 partial sequence numbers PDU											
	`Sequence Numbers PDU` `Level 2 partial sequence number PDU must have Intra-domain Routing` `protocol Discriminator=0x83, PDU Type=27, Version/Protocol ID extension` `(3rd octet)=1 and Version (6th octet)=1 in the header`											
ANVL-ISIS-3.14 **MUST**	pass	unpredict	unpredict	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.12 p64 Level 2 partial sequence number PDU											
	`Sequence Numbers PDU` `Bit 6-8 of PDU Type (5th octet) and Reserved(7th octet) are` `reserved which are always set to zero in Level 2 partial sequence` `numbers PDU`											
ANVL-ISIS-3.15 **MUST**	pass	pass	pass	pass	pass	pass	pass	unpredict	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s9.12 p64 Level 2 partial sequence number PDU											
	`Sequence Numbers PDU` `The valid ID Length field shall take any one of these following` `values:` `1. An integer between 1 and 8 ,inclusive,indicating an ID field of` `coresponding length` `2. The value zero, which indicates a six octet ID,field length` `3. The value 255,which means anull ID field(ie zero length)`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-3.16 **MUST**	pass	pass	unpredict	pass	pass	unpredict	pass	unpredict	pass	pass	pass	unpredict
	ISO/IEC 10589:1992(E) s9.12 p64 Level 2 partial sequence number PDU RFC 1195 s5.3.9,p49 Level 2 partial sequence number PDU											
	`Sequence Numbers PDU` `The valid codes that must be present in the VARIABLE LENGTH FIELD of` `level 2 partial sequence numbers PDU are:` `1. LSP Entries`											
ANVL-ISIS-4.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s7.2.4, p14, Links											
	`Level 1 Adjacency` `IS discover neighbours and forms adjacencies by exchanging` `ISIS Hello PDUs.`											
ANVL-ISIS-4.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195, s5.1, p33, Overview of ISIS PDUs											
	`Level 1 Adjacency` `Hello packets are used to initialize and maintain adjacencies between` `neighbouring ISs.`											
ANVL-ISIS-4.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 1 Adjacency` `An L1 IS shall transmit only L1 LAN IIHs.`											
ANVL-ISIS-4.4 **SHOULD**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 1 Adjacency` `An L1 IIH sent by L1 IS should contain the manualAreaAddresses and` `LAN Addresses of L1 IS adjacencies.`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-4.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 1 Adjacency` `An L1 IS shall transmit L1 LAN IIHs to the multi-destination address AllL1ISs.`											
ANVL-ISIS-4.6 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 1 Adjacency` `L1 ISs shall listen on the multi-destination address AllL1ISs.`											
ANVL-ISIS-4.7 **MUST**	pass	FAIL	FAIL	pass	pass	FAIL	pass	FAIL	FAIL	pass	pass	FAIL
	NEGATIVE: ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 1 Adjacency` `L1 ISs shall reject any L1 LAN IIH that doesn"t have the destination as AllL1ISs.`											
ANVL-ISIS-4.8 **SHOULD**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.1, p44, IIH PDU acceptance tests											
	`Level 1 Adjacency` `If the IDLength of the L1 IIH is not equal to the value of the IS routingDomainIDLength, it should be discarded.`											
ANVL-ISIS-4.9 **SHOULD**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.2, p45, Receipt of L1 LAN IIH PDUs ISO/IEC 10589:1992(E), s8.2.4.2, p38, IIH PDU Processing											
	`Level 1 Adjacency` `If the received L1 IIH"s areaAddresses do not match any of the manualAreaAddresses of the L1 IS, it should reject the adjacency.`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-4.10 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.2, p45, Receipt of L1 LAN IIH PDUs ISO/IEC 10589:1992(E), s8.2.4.2, p38, IIH PDU Processing											
	`Level 1 Adjacency` `If the received L1 IIHs areaAddress field matches any of the` `values from the manualAreaAddresses of the L1 IS, it shall accept the` `adjacency.`											
ANVL-ISIS-4.11 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.2, p45, Receipt of L1 IIH PDUs ISO/IEC 10589:1992(E), s8.2.4.2, p38, IIH PDU Processing											
	`Level 1 Adjacency` `If the received L1 IIHs maximumAreaAddresses value is equal to` `the ISs maximumAreaAddresses, accept the PDU.`											
ANVL-ISIS-4.12 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.2, p45, Receipt of L1 IIH PDUs											
	`Level 1 Adjacency` `If the L1 ISs maximumAreaAddresses is not 3, then it will discard all` `L1 LAN IIH with non matching maximumAreaAddresses value.`											
ANVL-ISIS-4.13 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E), s8.2.4.2, p38, IIH PDU processing ISO/IEC 10589:1992(E), s8.4.2.2, p45, Receipt of L1 IIH PDUs											
	`Level 1 Adjacency` `If the L1 IS only implements a value of three for maximumAreaAddresses,` `IS will accept an L1 IIH even if it has a non-matching` `maximumAreaAddresses value.`											
ANVL-ISIS-4.14 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.5.1, p45, New Adjacencies											
	`Level 1 Adjacency` `When an L1 IS receives an L1 LAN IIH from another IS (R), then the` `next L1 IIH generated by the IS will include R.`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-4.15 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.5.1, p45, New Adjacencies											
	`Level 1 Adjacency` `When an L1 IS receives an L1 LAN IIH with its own entry, then it shall create an adjacency.`											
ANVL-ISIS-4.16 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.5.2, p45, New Adjacencies											
	`Level 1 Adjacency` `If a neighbour is not heard within the Holding Time, the L1 IS shall purge it from the database.`											
ANVL-ISIS-5.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s7.2.4, p14, Links											
	`Level 2 Adjacency` `IS discover neighbours and forms adjacencies by exchanging ISIS Hello PDUs.`											
ANVL-ISIS-5.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195, s5.1, p33, Overview of ISIS PDUs											
	`Level 2 Adjacency` `Hello packets are used to initialize and maintain adjacencies between neighbouring ISs.`											
ANVL-ISIS-5.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 2 Adjacency` `An L2 IS shall transmit only L2 LAN IIHs.`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-5.4 **SHOULD**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 2 Adjacency` `An L2 IIH sent by L2 IS should contain the manual Area Addresses and` `LAN Addresses of L2 IS adjacencies.`											
ANVL-ISIS-5.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 2 Adjacency` `An L2 IS shall transmit L2 LAN IIHs to the multi-destination` `address AllL2ISs.`											
ANVL-ISIS-5.6 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 2 Adjacency` `L2 ISs shall listen on the multi-destination address AllL2ISs.`											
ANVL-ISIS-5.7 **MUST**	pass	FAIL	FAIL	pass	pass	FAIL	pass	FAIL	FAIL	pass	pass	FAIL
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 2 Adjacency` `L2 ISs shall reject any L2 LAN IIH that doesn"t have the` `destination as AllL2ISs.`											
ANVL-ISIS-5.8 **SHOULD**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.1, p44, IIH PDU acceptance tests											
	`Level 2 Adjacency` `If the IDLength of the L2 LAN IIH is not equal to the value of the ISs` `routingDomainIDLength, it should be discarded.`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-5.9 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.5.1, p45, New Adjacencies											
	`Level 2 Adjacency` `When an L2 IS receives an L2 LAN IIH from another IS (R), then the` `next L2 IIH generated by the IS will include R.`											
ANVL-ISIS-5.10 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.5.1, p45, New Adjacencies											
	`Level 2 Adjacency` `When an L2 IS receives an L2 LAN IIH with its own entry, then it shall` `create an adjacency.`											
ANVL-ISIS-5.11 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2.5.2, p45, New Adjacencies											
	`Level 2 Adjacency` `If a neighbour is not heard within the Holding Time, the L2 IS shall` `purge it from the database.`											
ANVL-ISIS-6.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 1 and Level 2 Adjacency` `An L1/L2 IS shall create separate adjacencies on receipt of L1 and L2` `LAN IIH.`											
ANVL-ISIS-6.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 1 and Level 2 Adjacency` `An L1/L2 IS shall transmit both L1 and L2 LAN IIHs.`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-6.3 **MUST**	pass	pass	pass	unpredict	pass	pass	pass	pass	pass	unpredict	unpredict	pass
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 1 and Level 2 Adjacency` `An L1/L2 IS shall listen on the multi-destination address AllL1ISs and AllL2ISs for L1 and L2 LAN IIHs respectively.`											
ANVL-ISIS-6.4 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E), s8.4.2, p44, Broadcast subnetwork IIH PDUs											
	`Level 1 and Level 2 Adjacency` `An L1/L2 IS shall reject any LAN IIH that doesn"t have the destination as AllL1ISs or AllL2ISs.`											
ANVL-ISIS-7.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.2.3 p14 Broadcast subnetwork RFC 1195 s4.3 p31 Designated routers and Pseudonodes											
	`Level 1 Designated Routers and Pseudonodes` `Election process of level 1 designated IS is done by verifying priority field in the IIH`											
ANVL-ISIS-7.2 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s7.2.3 p14 Broadcast subnetwork RFC 1195 s4.3 p31 Designated routers and Pseudonodes											
	`Level 1 Designated Routers and Pseudonodes` `Election process of level 1 designated IS is done by verifying priority field in the IIH`											
ANVL-ISIS-7.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.2.3 p14 Broadcast subnetwork RFC 1195 s4.3 p31 Designated routers and Pseudonodes											
	`Level 1 Designated Routers and Pseudonodes` `Election process of level 1 designated IS is done by verifying priority field in the IIH and the MAC address`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-7.4 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s7.2.3 p14 Broadcast subnetwork RFC 1195 s4.3 p31 Designated routers and Pseudonodes											
	`Level 1 Designated Routers and Pseudonodes` `Election process of level 1 designated IS is done by verifying` `priority field in the IIH and the MAC address`											
ANVL-ISIS-7.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.5 p46 LAN designated IS											
	`Level 1 Designated Routers and Pseudonodes` `An L1 IS becomes an L1 Designated IS, it shall transmit L1` `pseudonode LSP`											
ANVL-ISIS-7.6 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.5 p47 LAN designated ISs											
	`Level 1 Designated Routers and Pseudonodes` `An L1 IS shall transmit L1 LAN IIHs with the LAN ID field set to the` `LAN ID of the designated L1 IS`											
ANVL-ISIS-8.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.2.3 p14 Broadcast subnetwork RFC 1195 s4.3 p31 Designated routers and Pseudonodes											
	`Level 2 Designated Routers and Pseudonodes` `Election process of level 2 designated IS is done by verifying` `priority field in the IIH`											
ANVL-ISIS-8.2 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s7.2.3 p14 Broadcast subnetwork RFC 1195 s4.3 p31 Designated routers and Pseudonodes											
	`Level 2 Designated Routers and Pseudonodes` `Election process of level 2 designated IS is done by verifying` `priority field in the IIH`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-8.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.2.3 p14 Broadcast subnetwork RFC 1195 s4.3 p31 Designated routers and Pseudonodes											
	`Level 2 Designated Routers and Pseudonodes` `Election process of level 2 designated IS is done by verifying` `priority field in the IIH and the MAC address`											
ANVL-ISIS-8.4 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s7.2.3 p14 Broadcast subnetwork RFC 1195 s4.3 p31 Designated routers and Pseudonodes											
	`Level 2 Designated Routers and Pseudonodes` `Election process of level 2 designated IS is done by verifying` `priority field in the IIH and the MAC address`											
ANVL-ISIS-8.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.5 p46 LAN designated IS											
	`Level 2 Designated Routers and Pseudonodes` `An L2 IS becomes an L2 Designated IS,it shall transmit L2` `pseudonode LSP`											
ANVL-ISIS-8.6 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.5 p47 LAN designated ISs											
	`Level 2 Designated Routers and Pseudonodes` `An L2 IS shall transmit L2 LAN IIHs with the LAN ID field set to the` `LAN ID of the designated L2 IS`											
ANVL-ISIS-9.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.2.1 p44 IIH PDU Acceptance Tests RFC 1195 s3.9 p25 Authentication											
	`Level 1 LAN Circuit Authentication` `If authentication is enabled on a circuit and the received L1 LAN IIH` `doesn"t contain the authentication information field, the L1 IS shall` `discard the PDU`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-9.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.4 p46 Transmission of LAN IIH PDUs RFC 1195 s3.9 p25 Authentication											
	`Level 1 LAN Circuit Authentication` `An L1 IS will include authentication information of type Password` `containing the circuitTransmitPassword as the authentication value in` `its L1 LAN IIH PDU if authentication is enabled on the circuit`											
ANVL-ISIS-9.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.2.1 p45 IIH PDU Acceptance Tests RFC 1195 s3.9 p25 Authentication											
	`Level 1 LAN Circuit Authentication` `If authentication is enabled on a circuit and the received L1 LAN IIH` `contains authentication information of type Password, and if this` `Password matches any of the circuitReceivePasswords, then the L1 IS` `accepts the PDU`											
ANVL-ISIS-9.4 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.2.1 p45 IIH PDU Acceptance Tests RFC 1195 s3.9 p25 Authentication											
	`Level 1 LAN Circuit Authentication` `If authentication is enabled on a circuit and the received L1 LAN IIH` `contains authentication information of type Password, and if this` `Password does not match any of the circuitReceivePasswords, then` `the L1 IS discards the PDU`											
ANVL-ISIS-9.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.2.1 p45 IIH PDU Acceptance Tests RFC 1195 s3.9 p25 Authentication											
	`Level 1 LAN Circuit Authentication` `If authentication is enabled on a circuit and the received L1 LAN` `IIH contains authentication information of a type that the IS doesn"t` `implement, then the IS discards the PDU`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-10.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.2.1 p45 IIH PDU Acceptance Tests RFC 1195 s3.9 p25 Authentication											
	`Level 2 LAN Circuit Authentication` `If authentication is enabled on a circuit and the received L2 LAN IIH doesn"t contain the authentication information field, the L2 IS shall discard the PDU`											
ANVL-ISIS-10.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.4 p46 Transmission of LAN IIH PDUs RFC 1195 s3.9 p25 Authentication											
	`Level 2 LAN Circuit Authentication` `An L2 IS will include authentication information of type Password containing the circuitTransmitPassword as the authentication value in its L2 LAN IIH PDU if authentication is enabled on the circuit`											
ANVL-ISIS-10.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.2.1 p45 IIH PDU Acceptance Tests RFC 1195 s3.9 p25 Authentication											
	`Level 2 LAN Circuit Authentication` `If authentication is enabled on a circuit and the received L2 LAN IIH contains authentication information of type Password, and if this Password matches any of the circuitReceivePasswords, then the L2 IS accepts the PDU`											
ANVL-ISIS-10.4 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.2.1 p45 IIH PDU Acceptance Tests RFC 1195 s3.9 p25 Authentication											
	`Level 2 LAN Circuit Authentication` `If authentication is enabled on a circuit and the received L2 LAN IIH contains authentication information of type Password, and if this Password does not match any of the circuitReceivePasswords, then the L2 IS discards the PDU`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-10.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s8.4.2.1 p45 IIH PDU Acceptance Tests RFC 1195 s3.9 p25 Authentication											
	`Level 2 LAN Circuit Authentication` `If authentication is enabled on a circuit and the received L2 LAN` `IIH contains authentication information of a type that the IS doesn"t` `implement, then the IS discards the PDU`											
ANVL-ISIS-11.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.2 p19-p20 Generation of local link state information											
	`Periodic LSP Generation` `The update process is responsible for generating Link State PDUs` `under the following circumtances.` `- Upon Timer Expiration (LSPGenerationTimer)`											
ANVL-ISIS-11.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.5 p21 Periodic LSP Generation											
	`Periodic LSP Generation` `The Intermediate System shall regenerate every LSP at intervals` `of atmost maximum LSPGeneration interval`											
ANVL-ISIS-11.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.5 p21 Periodic LSP Generation											
	`Periodic LSP Generation` `The Intermediate System shall regenerate every LSP at intervals` `of atmost maximum LSPGeneration interval`											
ANVL-ISIS-11.4 **SHOULD**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s7.3.16.1 p29 Sequence number											
	`Periodic LSP Generation` `When the sequence number reaches the Sequence Modulus, the routing` `module should be disabled for a period of at least MaxAge +` `ZeroAgeLifetime`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-11.5 **MUST**	pass	FAIL	FAIL	pass	pass	FAIL	pass	unpredict	FAIL	pass	pass	FAIL
	ISO/IEC 10589:1992(E) s7.3.16.3-4 p29 Remaining LifeTime Field & LSP Expiration synchronization											
	`Periodic LSP Generation` `If the Remaining LifeTime field of the received LSP is zero` `the system shall purge that LSP from its database and synchronizes` `by flooding an expired LSP`											
ANVL-ISIS-11.6 **MUST**	pass	FAIL	FAIL	pass	pass	unpredict	pass	FAIL	FAIL	pass	pass	FAIL
	ISO/IEC 10589:1992(E) s7.3.16.3-4 p29 Remaining LifeTime Field & LSP Expiration synchronization											
	`Periodic LSP Generation` `If the Remaining LifeTime field of the received LSP is zero` `the system shall purge that LSP from its database and synchronizes` `by flooding an expired LSP`											
ANVL-ISIS-11.7 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.2 p19-p20 Generation of local link state information											
	`Periodic LSP Generation` `The update process is responsible for generating Link State PDUs` `under the following circumtances.` `- Upon Timer Expiration (LSPGenerationTimer)`											
ANVL-ISIS-11.8 **SHOULD**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s7.3.16.1 p29 Sequence number											
	`Periodic LSP Generation` `When the sequence number reaches the Sequence Modulus, the routing` `module should be disabled for a period of at least MaxAge +` `ZeroAgeLifetime`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-17.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 S3.5 P23 Type of Service Routing											
	Type of Service Routing If there is no path from source to destination made up of routers, which supports that particular type of service, then the packet will forwarded using default metric											
ANVL-ISIS-17.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.4 P21 Multiple LSPs											
	Type of Service Routing If an LSP becomes empty because of all the adjacencies reported in that LSP no longer exists, an IS may purge that LSP instead of re-issuing it											
ANVL-ISIS-17.3 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	RFC 1195 s5.3.4 P42 Level 1 Link State PDU											
	Type of Service Routing Bit 8 of DEFAULT METRIC is reserved and must be set to zero on transmission											
ANVL-ISIS-17.4 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	RFC 1195 s5.3.4 P42 Level 1 Link State PDU											
	Type of Service Routing Bit 7 of DEFAULT METRIC field (marked I/E) must be set to zero indicating internal metric											
ANVL-ISIS-17.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.2.8.1 p15 Computing routes through overloaded Intermediate systems											
	Type of Service Routing The Decision Process shall not utilise a link to an Intermediate system neighbour from an IS whose LSPs have the LSP Data-base Overload indication set.											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-17.7 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 S3.5 P23 Type of Service Routing											
	Type of Service Routing If there is no path from source to destination made up of routers, which supports that particular type of service, then the packet will forwarded using default metric											
ANVL-ISIS-17.8 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.4 P21 Multiple LSPs											
	Type of Service Routing If an LSP becomes empty because of all the adjacencies reported in that LSP no longer exists, an IS may purge that LSP instead of re-issuing it											
ANVL-ISIS-17.9 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	RFC 1195 s5.3.5 P45 Level 2 Link State PDU											
	Type of Service Routing Bit 8 of DEFAULT METRIC is reserved and must be set to zero on transmission											
ANVL-ISIS-17.10 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	RFC 1195 s5.3.4 P45 Level 2 Link State PDU											
	Type of Service Routing Bit 7 of DEFAULT METRIC field (marked I/E) must be set to zero indicating internal metric											
ANVL-ISIS-17.11 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.2.8.1 p15 Computing routes through overloaded Intermediate systems											
	Type of Service Routing The Decision Process shall not utilise a link to an Intermediate system neighbour from an IS whose LSPs have the LSP Data-base Overload indication set.											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-18.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.2.5 P14 Multiple LSPs for the same system											
	`Propagation of LSPs` `The following information shall be taken only from LSP with LSP number zero and disregarded if the LSP number is non-zero` `1. The setting of the LSP Database Overload bit` `2. The value of the IS Type field` `3. The Area Addresses option field`											
ANVL-ISIS-18.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3 P19 Update process											
	`Propagation of LSPs` `The update process is responsible for generating and propagating Link State information reliably throughout the routing domain`											
ANVL-ISIS-18.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.2 P19-20 Generation of local link state " information											
	`Propagation of LSPs` `The update process is responsible for generating Link State PDUs under the following circumstances:` `- When notified by the subnetwork dependent functions of an adjacency database change`											
ANVL-ISIS-18.4 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.8 P22 Generation of level 1 pseudonode LSPs											
	`Propagation of LSPs` `The Area Addresses option will not be present when an IS generates a level 1 Link State PDU on behalf of pseudonode`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-18.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.15.1 P24-25 Action on receipt of Link state PDU											
	`Propagation of LSPs If this is a level 1 LSP and the Maximum Area Address field is not equal to the value of the ISs Maximum Area Address then the PDU shall be discarded`											
ANVL-ISIS-18.6 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.14.1 p23 Propagation of LSPs											
	`Propagation of LSPs Duplicate PDUs are detected and dropped`											
ANVL-ISIS-18.7 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.14.2 p24 Propagation ofLSPs											
	`Propagation of LSPs Level 1 Link State PDUs shall be propagated on circuits, which have at least one Level 1 adjacency`											
ANVL-ISIS-18.8 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s7.3.14.2, p24, Propagation of LSPs											
	`Propagation of LSPs When propagating a L1 LSP on a broadcast subnetwork, the IS shall transmit to the multi-destination Address AllL1IS.`											
ANVL-ISIS-18.9 **MUST**	pass	FAIL	FAIL	pass	pass	FAIL	pass	FAIL	FAIL	pass	pass	FAIL
	ISO/IEC 10589:1992(E) s7.3.14.2 p24 Propagation of LSPs											
	`Propagation of LSPs When an Intermediate System receives a LSP older than the one stored in the database, the stored link state PDU needs to be sent on the link form which the older one was received`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-18.10	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.16.3 P29 Remaining Lifetime Field											
MUST	Propagation of LSPs When the source generates a link state PDU,it shall set the Remaining Lifetime to MaxAge. Before transmitting a link state PDU to a neighbour, a system shall decrement the Remaining Lifetime											
ANVL-ISIS-18.12	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 S3.1 P15 Exchange of routing information											
MUST	Propagation of LSPs Level 1 routers need to know what IP address are reachable from each level 1 router in their area											
ANVL-ISIS-18.13	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 S3.7 P24 IP-Only Operation											
MUST	Propagation of LSPs Some of the VARIABLE LENGTH fields from IS-IS link packet must be omitted for IP only routers - The End System Neighbours entries are omitted - The Prefix Neighbours entries are omitted											
ANVL-ISIS-19.1	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.2.5 P14 Multiple LSPs for the same system											
MUST	Generation of Local Link State Information The following information shall be taken only from LSP with LSP number zero and disregarded if the LSP number is non-zero 1. The setting of the LSP Database Overload bit 2. The value of the IS Type field 3. The Area Addresses option field											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-19.2 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3 P19 Update process											
	`Generation of Local Link State Information` `The update process is responsible for generating and propagating` `Link State information reliably throughout the routing domain`											
ANVL-ISIS-19.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.2 P19-20 Generation of local link state " information											
	`Generation of Local Link State Information` `The update process is responsible for generating Link State PDUs` `under the following circumstances:` `- When notified by the subnetwork dependent functions of an` `adjacency database change`											
ANVL-ISIS-19.4 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.8 P22 Generation of level 2 pseudonode LSPs											
	`Generation of Local Link State Information` `The Area Addresses option will not be present when an IS generates` `a level 2 Link State PDU on behalf of pseudonode`											
ANVL-ISIS-19.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.15 P24-25 Action on receipt of Link state PDU											
	`Generation of Local Link State Information` `If this is a level 2 LSP and the Maximum Area Address field is not` `equal to the value of the ISs Maximum Area Address then the PDU shall` `be discarded`											
ANVL-ISIS-19.6 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.14.1 p23 Propagation of LSPs											
	`Generation of Local Link State Information` `Duplicate PDUs are detected and dropped`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-19.7 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.14.2 p24 Propagation ofLSPs											
	`Generation of Local Link State Information Level 2 Link State PDUs shall be propagated on circuits, which have at least one Level 2 adjacency`											
ANVL-ISIS-19.8 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E), s7.3.14.2, p24, Propagation of LSPs											
	`Generation of Local Link State Information When propagating a L2 LSP on a broadcast subnetwork, the IS shall transmit to the multi-destination Address AllL2IS.`											
ANVL-ISIS-19.9 **MUST**	pass	FAIL	FAIL	pass	pass	FAIL	pass	FAIL	FAIL	pass	pass	FAIL
	ISO/IEC 10589:1992(E) s7.3.14.2 p24 Propagation of LSPs											
	`Generation of Local Link State Information When an Intermediate System receives a LSP older than the one stored in the database, the stored link state PDU needs to be sent on the link form which the older one was received`											
ANVL-ISIS-19.10 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.15.1 p24 Action on receipt of a link state PDU											
	`Generation of Local Link State Information If the ID Length of the PDU is not equal to the value of the ISs routingDomainISLength, the PDU shall be discarded`											
ANVL-ISIS-19.11 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) S7.3.16.3 P29 Remaining Lifetime Field											
	`Generation of Local Link State Information When the source generates a link state PDU,it shall set the Remaining Lifetime to MaxAge. Before transmitting a link state PDU to a neighbour, a system shall decrement the Remaining Lifetime`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-19.13 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 S3.2 P17 Exchange of routing information											
	`Generation of Local Link State Information` `Level 2 routers need to know what IP address are reachable from` `each level 2 router in their area`											
ANVL-ISIS-19.14 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC 1195 S3.7 P25 IP-Only Operation											
	`Generation of Local Link State Information` `Some of the VARIABLE LENGTH fields from IS-IS link packet must be` `omitted for IP only routers` `- The End System Neighbours entries are omitted` `- The Prefix Neighbours entries are omitted`											
ANVL-ISIS-20.1 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s7.3.16.1 p28 sequence numbers											
	`Level 1 LSP Sequence Numbers` `When a system initializes, it shall start with sequence number` `with 1 for its own Link State PDUs:`											
ANVL-ISIS-20.2 **SHOULD**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.16.1 p28 sequence numbers											
	`Level 1 LSP Sequence Numbers` `The sequence number of any actually generated Link State PDU` `should not be zero`											
ANVL-ISIS-20.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.16.1 p29 sequence numbers											
	`Level 1 LSP Sequence Numbers` `Update sequence number depending on the sequence number received from` `system in the domain`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-20.4 **MUST**	pass	FAIL	FAIL	pass	pass	FAIL	pass	FAIL	FAIL	pass	pass	FAIL
	ISO/IEC 10589:1992(E) s7.3.16.2 p29 LSP confusion											
	`Level 1 LSP Sequence Numbers` `If the sequence numbers match, but checksums do not and the LSP is not generated by the local system, then store the LSP with zero Remaining Lifetime, and flood the LSP`											
ANVL-ISIS-21.1 **MUST**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	ISO/IEC 10589:1992(E) s7.3.16.1 p28 sequence numbers											
	`Level 2 LSP Sequence Numbers` `When a system initializes, it shall start with sequence number with 1 for its own Link State PDUs`											
ANVL-ISIS-21.2 **SHOULD**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.16.1 p29 sequence numbers											
	`Level 2 LSP Sequence Numbers` `The sequence number of any actually generated Link State PDU should not be zero:`											
ANVL-ISIS-21.3 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.16.1 p29 sequence numbers											
	`Level 2 LSP Sequence Numbers` `Update sequence number depending on the sequence number received from system in the domain`											
ANVL-ISIS-21.4 **MUST**	pass	FAIL	FAIL	pass	pass	FAIL	pass	FAIL	FAIL	pass	pass	FAIL
	ISO/IEC 10589:1992(E) s7.3.16.2 p29 LSP confusion											
	`Level 2 LSP Sequence Numbers` `If the sequence numbers match, but checksums do not and the LSP is not generated by the local system, then store the LSP with zero Remaining Lifetime, and flood the LSP`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-24.1 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	ISO/IEC 10589:1992(E) s7.3.19.1 p31 Entering the waiting state											
	`Waiting State` `When an LSP cannot be stored, the LSP shall be ignored and waiting` `State will be entered`											
ANVL-ISIS-24.2 **MUST**	pass	FAIL	FAIL	pass	pass	FAIL	pass	FAIL	FAIL	pass	pass	FAIL
	ISO/IEC 10589:1992(E) s7.3.19.1 p31 Entering the waiting state											
	`Waiting State` `When an LSP cannot be stored, the LSP shall be ignored and waiting` `State will be entered`											
ANVL-ISIS-25.2 **SHOULD**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 2.1 Page 3 " MaxAge"											
	`ISISUpdate - RFC 3719` `MaxAge SHOULD exceed maximumLSPGenerationInterval by atleast 300 seconds` `Note: Verify the RemainingLifeTime of the Packet`											
ANVL-ISIS-25.3 **MAY**	pass	FAIL	FAIL	pass	pass	FAIL	pass	FAIL	FAIL	pass	pass	FAIL
	RFC3719 Section 2.2 Page 4 " ISISHoldingMultiplier"											
	`ISISUpdate - RFC 3719` `An implementation MAY allow ISISHoldingMultiplier to be configurable.`											
ANVL-ISIS-25.4 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 3.1 Page 4 " ID Length"											
	`ISISUpdate - RFC 3719` `An implementation MUST use an ID Length of 6.`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-25.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 3.1 Page 4 " ID Length"											
	ISISUpdate - RFC 3719 If a router encounters a PDU with an ID Length different from 0 or 6, section 7.3.15.a.2 dictates that it MUST discard the PDU											
ANVL-ISIS-25.6 **SHOULD**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	RFC3719 Section 3.2 Page 5 "maximumAreaAddresses"											
	ISISUpdate - RFC 3719 An implementation SHOULD use the value 3.											
ANVL-ISIS-25.7 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 3.2 Page 5 " maximumAreaAddresses"											
	ISISUpdate - RFC 3719 If a router receives a PDU with maximumAreaAddresses that is not 0 or 3, it MUST discard the PDU, as described in section 7.3.15.a.3											
ANVL-ISIS-25.8 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 3.3 Page 5 " Protocol Version"											
	ISISUpdate - RFC 3719 If a router receives a PDU with a value other than 1 for either field, it MUST drop the packet. Note: Verify the Version field											
ANVL-ISIS-25.9 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 3.3 Page 5 " Protocol Version"											
	ISISUpdate - RFC 3719 If a router receives a PDU with a value other than 1 for either field, it MUST drop the packet. Note: Verify the Version/Protocol ID field											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-25.23 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 11 Page 11 "Doppelganger LSPs"											
	`ISISUpdate - RFC 3719` `A complete set of CSNPs is a set whose Start LSPID and End` `LSPID ranges cover the complete possible range of LSPIDs.` `(i.e., there is no possible LSPID value which does not appear` `within the range of one of the CSNPs in the set).`											
ANVL-ISIS-26.2 **SHOULD**	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
	RFC3719 Section 2.1 Page 3 " MaxAge"											
	`ISISUpdate - RFC 3719 Part 2` `MaxAge SHOULD exceed maximumLSPGenerationInterval by atleast 300 seconds` `Note: Verify the RemainingLifeTime of the Packet`											
ANVL-ISIS-26.3 **MAY**	pass	unpredict	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 2.2 Page 4 " ISISHoldingMultiplier"											
	`ISISUpdate - RFC 3719 Part 2` `An implementation MAY allow ISISHoldingMultiplier to be configurable.`											
ANVL-ISIS-26.4 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 3.1 Page 4 " ID Length"											
	`ISISUpdate - RFC 3719 Part 2` `An implementation MUST use an ID Length of 6.`											
ANVL-ISIS-26.5 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 3.1 Page 4 " ID Length"											
	`ISISUpdate - RFC 3719 Part 2` `If a router encounters a PDU with an ID Length different from 0 or 6,` `section 7.3.15.a.2 dictates that it MUST discard the PDU`											

ISIS Results

	Master 2017-01-16 --- Ubuntu 16.04	Master 2017-01-16 --- FreeBSD 10.3	Stable 2.0-rc1 --- FreeBSD 10.3	Stable 2.0-rc1 --- Ubuntu 16.04	Stable 2.0-rc2 --- Ubuntu 16.04	Stable 2.0-rc2 --- FreeBSD 10.3	Master 2017-02-24 --- Ubuntu 16.04	Master 2017-02-24 --- FreeBSD 10.3	Master 2017-03-07 --- FreeBSD 10.3	Master 2017-03-07 --- Ubuntu 16.04	Release 2.0 --- Ubuntu 16.04	Release 2.0 --- FreeBSD 10.3
ANVL-ISIS-26.8 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 3.3 Page 5 " Protocol Version"											
	ISISUpdate - RFC 3719 Part 2 If a router receives a PDU with a value other than 1 for either field, it MUST drop the packet. Note: Verify the Version field											
ANVL-ISIS-26.9 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 3.3 Page 5 " Protocol Version"											
	ISISUpdate - RFC 3719 Part 2 If a router receives a PDU with a value other than 1 for either field, it MUST drop the packet. Note: Verify the Version/Protocol ID field											
ANVL-ISIS-26.23 **MUST**	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass	pass
	RFC3719 Section 11 Page 11 "Doppelganger LSPs"											
	ISISUpdate - RFC 3719 Part 2 A complete set of CSNPs is a set whose Start LSPID and End LSPID ranges cover the complete possible range of LSPIDs. (i.e., there is no possible LSPID value which does not appear within the range of one of the CSNPs in the set).											