

# Supernova测试仪IPv6一致性检测列表

Supernova测试仪支持IPv6一致性检测，支持对 IPv6 协议进行 IPv6 Ready Logo Phase-2检测和认证，保证各种 IPv6 实现版本与 IPv6 协议标准一致及相互之间能够安全、可靠地相互通信。检测项包括5个大项，包含319个小项

其中5个检测大项，包含：  
 RFC2460 - IPv6 Specification  
 RFC4861 - Neighbor Discovery for IPv6  
 RFC4862 - IPv6 Stateless Address Autoconfiguration  
 RFC1981 - Path MTU Discovery for IPv6  
 RFC4443 - ICMPv6

检测大项	检测小项
	1: Initialization
	2: Version Field
	3: Traffic Class Non-Zero - End Node
	4: Traffic Class Non-Zero - Intermediate Node (Routers Only)
	5: Part A: NUT receives Non-Zero Flow Label
	6: Part B: RUT forwards Non-Zero Flow Label (Routers Only)
	7: Part A: Payload Length Odd
	8: Part B: RUT forwards Payload Length Odd (Routers Only)
	9: Part C: Payload Length Even
	10: Part A: NUT Receives No Next Header
	11: Part B: RUT Forwards No Next Header - (Routers Only)
	12: Part A: Unrecognized Next Header in IPv6 Header (Multiple Values)
	13: Part B: Unexpected Next Header in IPv6 Header
	14: Hop Limit Zero - End Node
	15: Hop Limit Decrement - Intermediate Node (Routers Only)
	16: Part A: Request sent to Global Unicast address
	17: Part B: Request sent to Global Unicast address (prefix end in zero-valued fields)
	18: Part C: Request sent from unspecified address
	19: Part D: Request sent to Lookback address
	20: Part E: Request sent from Link Local address
	21: Part F: Request sent to Link Localaddress
	22: Part G: Request sent to Site-Local address
	23: Part H: Request sent to Global Scope multicast address
	24: Part I: Request sent to Link-local Scope multicast address
	25: Part J: Request sent to Multicast address (Reserved Value = 0)
	26: Part K: Request sent to Multicast address (Reserved Value = F)
	27: Next Header Zero
	28: Part A: End Node
	29: Part B: Intermediate Node (Routers Only)
	30: Part A: Unrecognized Next Header in Extension Header (Multiple Values)
	31: Part B: Unexpected Next Header in Extension Header
	32: Part A: Destination Options Header precedes Fragment Header Error from Destination Options Header
	33: Part B: Destination Options Header precedes Fragment Header Error from Fragment Header
	34: Part C: Fragment Header precedes Destination Options Header Error from FragmentHeader
	35: Part D: Fragment Header precedes Destination Options Header Error from Destination Options Header
	36: Part A: First Option has Most Significant Bits 00b Next has Most Significant Bits 01b
	37: Part B: First Option has Most Significant Bits 00b Next has Most Significant Bits 10b
	38: Part C: First Option has Most Significant Bits 00b Next has Most Significant Bits 11b
	39: Part A: Pad1 Option
	40: Part B: PadN Option
	41: Part C: Most Significant Bits 00b
	42: Part D: Most Significant Bits 01b
	43: Part E: Most Significant Bits 10b unicast destination
	44: Part F: Most Significant Bits 11bunicast destination
	45: Part G: Most Significant Bits 10b multicast destination
	46: Part H: Most Significant Bits 11b multicast destination
	47: Part A: Pad1 Option
	48: Part B: PadN Option
	49: Part C: Most Significant Bits 00b
	50: Part D: Most Significant Bits 01b
	51: Part E: Most Significant Bits 10b unicast destination
	52: Part F: Most Significant Bits 11b unicast destination
	53: PartG: Most Significant Bits 10b off-link multicast destination
	54: Part H: Most Significant Bits 11b on-link multicast destination
	55: Part A: Pad1 Option
	56: Part B: PadN Option
	57: Part C: Most Significant Bits 00b
	58: Part D: Most Significant Bits 01b
	59: Part E: Most Significant Bits 10b unicast destination
	60: Part F: Most Significant Bits 11b unicast destination
	61: Part G: Most Significant Bits 10b multicast destination
	62: Part H: Most Significant Bits 11b multicast destination
	63: Part A: Unrecognized Routing Type 33
	64: Part B: Unrecognized Routing Type 0
	65: Part A: Unrecognized Routing Type 33
	66: Part B: Unrecognized Routing Type 0
	67: Part A: All Fragments are Valid
	68: Part B: All Fragments are Valid reverse order
	69: Part C: Fragment IDs Differ Between Fragments
	70: Part D: Source Addresses Differ Between Fragments
	71: Part E: Destination Address Differ Between Fragments
	72: Part F: Reassemble to 1500
	73: Part A: Time Elapsed Between Fragments less than Sixty Seconds
	74: Part B: Time Exceeded Before Last Fragments Arrive
	75: Part C: Time Exceeded (Global) Only First Fragment Received
	76: Part D: Time Exceeded (Link-local) Only First Fragment Received
	77: Part E: Time Exceeded Only Second Fragment Received
	78: Fragment Header M-Bit Set Payload Length Invalid
	79: Stub Fragment Header
RFC2460 - IPv6 Specification	

1: Initialization
2: Part A: Link-Local Address
3: Part B: Global Address On-link Prefix covers TN1
4: Part C: Global Address On-link Prefix does not cover TN2
5: Part A: Single Queue
6: Part B: Multiple Queues
7: Part A: Neighbor Solicitation Origination Target Address Being Link-local
8: Part B: Neighbor Solicitation Origination Target Address Being Global
9: Part A: Neighbor Solicitation Origination Link-local => Link-local
10: Part B: Neighbor Solicitation Origination Global => Global
11: Part C: Neighbor Solicitation Origination Link-local => Global
12: Part D: Neighbor Solicitation Origination Global => Link-local
13: Part A: Invalid Target Address
14: Part B: Invalid Destination Address
15: Part C: Invalid Source Link-layer Address Option
16: Part D: Invalid Hop Limit
17: Part E: Invalid Checksum
18: Part F: Invalid ICMP code
19: Part G: Invalid ICMP Length
20: Part H: Option of Length 0
21: Part A: Unicast Neighbor Solicitation
22: Part B: Multicast Neighbor Solicitation
23: Part C: Unicast Neighbor Solicitation without SLL
24: Part A: Unicast Neighbor Solicitation
25: Part B: Multicast Neighbor Solicitation
26: Part C: UnicastNeighbor Solicitation without SLL
27: Part A: Unicast Neighbor Solicitation with the same SLLA
28: Part B: Unicast Neighbor Solicitation with a different SLLA
29: Part C: Multicast Neighbor Solicitation with the same SLLA
30: Part D: Multicast Neighbor Solicitation with a different SLLA
31: Part A: Unicast Neighbor Solicitation with the same SLLA
32: Part B: Unicast Neighbor Solicitation with adifferent SLLA
33: Part C: Multicast Neighbor Solicitation with the same SLLA
34: Part D: Multicast Neighbor Solicitation with a different SLLA
35: Part A: Unicast Neighbor Solicitation with the same SLLA
36: Part B: Unicast Neighbor Solicitation with a different SLLA
37: Part C: Multicast Neighbor Solicitation with the same SLLA
38: Part D: Multicast Neighbor Solicitation with a different SLLA
39: Neighbor Solicitation Processing Anycast (Routers Only)
40: Part A: NUT receives invalid NA (Solicited Flag ==1)
41: Part B: NUT receives invalid NA (Hop Limit == 254)
42: Part C: NUT receives invalid NA (Invalid Checksum)
43: Part D: NUT receives invalid NA (ICMP code != zero)
44: Part E: NUT receives invalid NA (ICMP length &lt; 24 octets)
45: Part F: NUT receives invalid NA (target == multicast address)
46: Part G: NUT receives invalid NA (option length ==zero)
47: Part A: Receiving NA with S = 0 O = 0 and TLLA
48: Part B: Receiving NA with S = 0 O = 1 and TLLA
49: Part C: Receiving NA with S = 1 O = 0 and TLLA
50: Part D: Receiving NA with S = 1 O = 1 and TLLA
51: Part E: Receiving NA with S = 0 O = 0 and NO TLLA
52: Part F: Receiving NA with S = 0 O = 1 and NO TLLA
53: Part G: Receiving NA with S = 1 O = 0 and NO TLLA
54: Part H: Receiving NA with S = 1 O = 1 and NO TLLA
55: Part A: Receiving NA with S = 1 and O = 1
56: Part B: Receiving NA with S = 1 and O = 0
57: Part C: Receiving NA with S = 0 and O = 1
58: Part D: Receiving NA with S = 0 and O = 0
59: Part E: Receiving NA without Target Link-Layer Address Option
60: Part A: Receiving Unicast NA with S = 0 O = 0 and no TLLA
61: Part B: Receiving Unicast NA with S = 0 O = 1 and no TLLA
62: Part C: Receiving Unicast NA with S = 1 O = 0 and no TLLA
63: Part D: Receiving Unicast NA with S = 1 O = 1 and no TLLA
64: Part E: Receiving Unicast NA with S = 0 O = 0 and the same TLLA
65: Part F: Receiving Unicast NA with S = 0 O = 1 and the same TLLA
66: Part G: Receiving Unicast NA with S = 1 O = 0 and the same TLLA
67: Part H: Receiving Unicast NA with S = 1 O = 1 and the same TLLA
68: Part I: Receiving Unicast NA with S = 0 O = 0 and a different TLLA
69: Part J: Receiving Unicast NA with S = 0 O = 1 and a different TLLA
70: Part K: Receiving Unicast NA with S = 1 O = 0 and a different TLLA
71: Part L: Receiving Unicast NA with S = 1 O = 1 and a different TLLA
72: Part M: Receiving Multicast NA with S = 0 O = 0 and the same TLLA
73: Part N: Receiving Multicast NA with S = 0 O = 1 and the same TLLA
74: Part O: Receiving Multicast NA with S = 0 O = 0 and a different TLLA
75: Part P: Receiving Multicast NA with S = 0 O = 1 and a different TLLA
76: Part Q: Receiving Multicast NA with S = 0 O = 0 and NO TLLA
77: Part R: Receiving Multicast NA with S = 0 O = 1 and NO TLLA
78: Part A: Receiving Unicast NA with S = 0 O = 0 and no TLLA
79: Part B: Receiving Unicast NA with S = 0 O = 1 and no TLLA
80: Part C: Receiving Unicast NA with S = 1 O = 0 and no TLLA
81: Part D: Receiving Unicast NA with S = 1 O = 1 and no TLLA
82: Part E: Receiving Unicast NA with S = 0 O = 0 and the same TLLA
83: Part F: Receiving Unicast NA with S = 0 O = 1 and the same TLLA
84: Part G: Receiving Unicast NA with S = 1 O = 0 and the same TLLA
85: Part H: Receiving Unicast NA with S = 1 O = 1 and the same TLLA
86: Part I: Receiving Unicast NA with S = 0 O = 0 and a different TLLA
87: Part J: Receiving Unicast NA with S = 0 O = 1 and a different TLLA
88: Part K: Receiving Unicast NA with S = 1 O = 0 and a different TLLA
89: Part L: Receiving Unicast NA with S = 1 O = 1 and a different TLLA

90: Part M: Receiving Multicast NA with S = 0 O = 0 and the same TLLA
91: Part N: Receiving Multicast NA with S = 0 O = 1 and the same TLLA
92: Part O: Receiving Multicast NA with S = 0 O = 0 and a different TLLA
93: Part P: Receiving Multicast NA with S = 0 O = 1 and a different TLLA
94: Part Q: Receiving Multicast NA with S = 0 O = 0 and NO TLLA
95: Part R: Receiving Multicast NA with S = 0 O = 1 and NO TLLA
96: Part A: Receiving Unicast NA with S = 0 O = 0 and no TLLA
97: Part B: Receiving Unicast NA with S = 0 O = 1 and no TLLA
98: Part C: Receiving Unicast NA with S = 1 O = 0 and no TLLA
99: Part D: Receiving Unicast NA with S = 1 O = 1 and no TLLA
100: Part E: Receiving Unicast NA with S = 0 O = 0 and the same TLLA
101: Part F: Receiving Unicast NA with S = 0 O = 1 and the same TLLA
102: Part G: Receiving Unicast NA with S = 1 O = 0 and the same TLLA
103: Part H: Receiving Unicast NA with S = 1 O = 1 and the same TLLA
104: Part I: Receiving Unicast NA with S = 0 O = 0 and a different TLLA
105: Part J: Receiving Unicast NA with S = 0 O = 1 and a different TLLA
106: Part K: Receiving Unicast NA with S = 1 O = 0 and a different TLLA
107: Part L: Receiving Unicast NA with S = 1 O = 1 and a different TLLA
108: Part M: Receiving Multicast NA with S = 0 O = 0 and the same TLLA
109: Part N: Receiving Multicast NA with S = 0 O = 1 and the same TLLA
110: Part O: Receiving Multicast NA with S = 0 O = 0 and a different TLLA
111: Part P: Receiving Multicast NA with S = 0 O = 1 and a different TLLA
112: Part Q: Receiving Multicast NA with S = 0 O = 0 and NO TLLA
113: Part R: Receiving Multicast NA with S = 0 O = 1 and NO TLLA
114: Initialization
115: Part A: Hop Limit is not 255
116: Part B: ICMPv6 checksum is not valid
117: Part C: ICMPv6 code is not 0
118: Part D: ICMPv6 length is less than 8 Octets
119: Part E: Option has length 0
120: Part F: Unspecified IP source address and a source link-layer address option
121: Router Sends Valid Router Advertisement (Routers Only)
122: Part A: No advertising interfaces
123: Part B: Advertising interface
124: Part A: SendingUnsolicitedRA(MinRtrAdvInterval<=interval<=MaxRtrAdvInterval)
125: Part B: Sending Unsolicited RA (MAX_INITIAL_RTR_ADVERT_INTERVAL)
126: Part C: Sending Unsolicited RA (Min Values)
127: Part D: Sending Unsolicited RA (Max Values)
128: Part E: Sending Unsolicited RA (Global Unicast Address -prefixendwithzerovalue fields)
129: Part F: Sending Unsolicited RA (Site-Local prefix)
130: Ceasing to Be An Advertising Interface (Routers Only)
131: Part A: MAX_RA_DELAY_TIME
132: Part B: MIN_DELAY_BETWEEN_RAS
133: Part A: RS processing with SLL no NCE
134: Part B: RS processing without SLL no NCE
135: Part C: RS processing NCE INCOMPLETE
136: Part D: RS with SLLA changed NCE REACHABLE
137: Part E: RS with SLLA unchanged NCE REACHABLE
138: Part F: RS with SLLA changed NCE STALE
139: Part G: RS with SLLA unchanged NCE STALE
140: Part H: RS with SLLA changed NCE PROBE
141: Part I: RA with SLLA unchanged NCE PROBE
142: Part A: Unspecified
143: Part B: Non-Zero
144: Part B: Reachable Time Configuration (Routers Only)
145: Initialization
146: Part A: Send Redirect
147: Part B: Send Redirect to Alternate Router
148: Part C: Source not neighbor
149: Part D: Destination Multicast
150: Redirect - Receive (Routers Only)
1: Address Autoconfiguration and Duplicate Address Detection
2: Part A: NUT receives DAD NS (target != NUT)
3: Part B: NUT receives DAD NS (target == NUT)
4: Part C: NUT receives DAD NA (target != NUT)
5: Part D: NUT receives DAD NA (target == NUT)
6: Part A: NUT receives invalid DAD NS (ICMP length &lt; 24 octets)
7: Part B: NUT receives invalid DAD NS (HopLimit !=255)
8: Part C: NUT receives invalid DAD NS (Dst = NUT's tentative address)
9: Part D: NUT receives invalid DAD NS (Dst = allnode)
10: Part E: NUT receives invalid DAD NS (ICMP code!= zero)
11: Part F: NUT receives invalid DAD NS (Invalid Checksum)
12: Part G: NUT receives invalid DAD NS (target == multicast address)
13: Part H: NUT receives invalid DAD NS (contains SLL)
14: Part I: NUT receives valid DAD NS (Reserved Field)
15: Part J: NUT receives valid DAD NS (contains TLL)
16: Part A: NUT receives invalid DAD NA (ICMP length &lt; 24 octets)
17: Part B: NUT receives invalid DAD NA (HopLimit != 255)
18: Part C: NUT receives invalid DAD NA (ICMP code!= zero)
19: Part D: NUT receives invalid DAD NA (Invalid Checksum)
20: Part E: NUT receives invalid DAD NA (SolicitedFlag ==1)
21: Part F: NUT receives invalid DAD NA (target == multicast address)
22: Part G: NUT receives invalid DAD NA (option length ==zero)
23: Part H: NUT receives valid DAD NA (Reserved Field)
24: Part I: NUT receives valid DAD NA (contains SLL)
25: Part A: NUT receives NS (src == unicast)
26: Part B: NUT receives NS (Src == unicast && Dst == NUT's tentative address)
27: Part A: Unicast Autoconfigured Address - Global
28: Part B: Unicast Autoconfigured Address Prefix ending in zero valued fields

**RFC1981 - Path MTU Discovery for IPv6**

- 29: Part C: Unicast Autoconfigured Address Site-Local
- 1: Initialization
- 2: Part A: ICMPv6 Echo Request 64 octets
- 3: Part B: ICMPv6 Echo Request 1280 octets
- 4: Part C: ICMPv6 Echo Request 1500 octets
- 5: Stored PMTU
- 6: Non-zero ICMPv6 Code
- 7: Reduce PMTU On-link
- 8: Reduce PMTU Off-link
- 9: Part A: MTU equal to 56
- 10: Part B: MTU equal to 1279
- 11: Part A: MTU increase
- 12: Part B: MTU equal to 0x1FFFFFFF
- 13: Checking For Increase in PMTU
- 14: Multicast Destination - One Router
- 15: Multicast Destination - Two Routers

**RFC4443 - ICMPv6**

- 1: Initialization (please ignore)
- 2: Transmitting Echo Requests
- 3: Part A: Request sent to Link-Local address
- 4: Part B: Request sent to global address
- 5: Part C: Request sent to multicast address - All Nodes Addresses
- 6: Part D: Request sent to multicast address - All Routers Addresses (Routers Only)
- 7: Part E: Request sent to unspecified address
- 8: Part F: Request sent to loopbackaddress
- 9: Part G: Request sent to Site-Local address
- 10: Part A: Route Unreachable - Routers Only
- 11: Part B: Address Unreachable - Routers Only
- 12: Part C: Port Unreachable - Link-Local Address - All Nodes
- 13: Part D: Port Unreachable - Global Address - All Nodes
- 14: Part E: Beyond Scope of Source Address - Routers Only
- 15: Part A: Unicast Destination
- 16: Part B: Multicast Destination
- 17: Part A: Receive Hop Limit 0
- 18: Part B: Decrement Hop Limit to 0
- 19: --- Fragment Test Preparation
- 20: Erroneous Header Field (Parameter Problem Generation)
- 21: Unrecognized Next Header (Parameter Problem Generation)
- 22: Unknown Informational Message Type
- 23: Part A: Reception of Flawed Destination Unreachable Code 0 with Address Unreachable
- 24: Part B: Reception of Flawed Destination Unreachable Code 3 with Hop Limit = 0
- 25: Part C: Reception of Flawed Time Exceeded Code 0 with No Route To Destination
- 26: Part D: Reception of Flawed Time Exceeded Code 1 with No Route To Destination
- 27: Part E: Reception of Flawed Packet Too Big with Address Unreachable
- 28: Part F: Reception of Flawed Parameter Problem with Hop Limit = 0
- 29: Part A: UDP Port Unreachable
- 30: --- Fragment Test Preparation
- 31: Part B: Echo Request Reassembly Timeout
- 32: Part A: UDP Port Unreachable (Routers and Hosts)
- 33: Part B: Echo Request Too Big (Routers Only)
- 34: --- Fragment Test Preparation
- 35: Part C: Echo Request Reassembly Timeout (Routers and Hosts)
- 36: Part D: Echo Request with Unknown Option in Destination Options (Routers and Hosts)
- 37: Part A: UDP Port Unreachable (Routers and Hosts)
- 38: Part B: Echo Request Too Big (Routers Only)
- 39: --- Fragment Test Preparation
- 40: Part C: Echo Request Reassembly Timeout (Routers and Hosts)
- 41: Part D: Echo Request with Unknown Option in Destination Options (Routers and Hosts)
- 42: Part A: UDP Port Unreachable
- 43: Part B: Echo Request Too Big
- 44: --- Fragment Test Preparation
- 45: Part C: Echo Request Reassembly Timeout
- 46: Part D: Echo Request with Unknown Option in Destination Options