



Agilent N2X
**IPv6 Routing Emulation
Software**

E7885A
Technical Data Sheet



Agilent N2X IPv6 Routing Emulation software integrates the most scalable BGP-4+, OSPFv3, IS-ISv6 and RIPng routing protocol emulations available to deliver unparalleled protocol verification and stress testing on your IPv6 capable router, switch or network.



Agilent Technologies

Key Features

- **Verify IPv6 routing protocol implementations**
- **Determine IPv6 routing scalability limitations**
- **Test IPv6 multi-protocol topologies**
- **Realistic internet scale IPv6 routing**
- **Rapid test configuration**
- **Script powerful customized tests**
- **Integrated IPv6 routing and traffic configuration**

BGP-4+

- Verify BGP+ operation on IPv6 stack
- Advertise IPv6 routes (using multi-protocol extensions)
- Verify BGP4+ scalability and robustness
- Full 6PE support
- Dynamically flap routes to simulate network instability

OSPFv3

- Verify and stress OSPFv3 implementations
- Support for Type 1- 5, 7-9 OSPFv3 LSAs
- Ability to simulate complex IPv6 link state topologies

IS-ISv6

- Verify and stress IS-ISv6 implementations
- Support for all IPv6 extensions to IS-IS including simultaneous IPv4-IPv6 operation
- Ability to simulate complex IPv6 link state topologies

RIPng

- Verify and stress RIPng implementations

Product Overview

Agilent N2X is the industry's most comprehensive test solution for testing the development and deployment of network services for converging network infrastructures. Service providers, network equipment manufacturers (NEMs), and component manufacturers can verify service attributes of entire networks end-to-end, while also isolating problems down to individual networking devices and subsystems

Agilent N2X IPv6 Routing Emulation software is most comprehensive IPv6 test solution in the market. It includes:

- Support for link establishment and maintenance protocols such as ICMPv6, NDP and IPv6CP
- Powerful traffic generation and performance analysis solution for all IPv6 related encapsulations (includes all header options, tunneling, ICMPv6 messages etc).
- IPv6 Routing as described within, including full support over subinterfaces. (VLAN's and ATM/FR PVC's)
- IPv6 Multicast capabilities using MLDv1/v2, PIM-SMv6/SSMv6 emulation.

This powerful software integrates the most scalable BGP-4+, OSPFv3, IS-ISv6 and RIPng routing protocol emulations available to deliver the most cost-effective protocol verification and stress testing of your IPv6 capable router, switch or network.

The IPv6 Routing Emulation solution compliments and extends the Agilent N2X IPv4 Routing Emulation software. Dual-stack operation is supported where a combination of IPv4 and IPv6 routing emulations can operate simultaneously.

IPv4 and IPv6 Routing protocols can be emulated individually, or concurrently to simulate extremely large and dynamic networks, and measure how well your router, switch or network manages unstable, multi-protocol network topologies inherent in the Internet today.

BGP-4+ Overview

Agilent N2X IPv6 Routing Emulation software provides a comprehensive set of capabilities for testing BGP-4+ implementations. This software provides the ability to emulate and measure the impact of dynamic route changes on the forwarding performance of IPv6 capable routers, switches and networks. By emulating internal and/or external BGP-4+ sessions, the BGP-4+ emulation capabilities build a realistic network cloud around the IPv6 capable switch or router under test. Any number of routes with a flexible range of attributes can be advertised into the switch, router or network under test.

BGP-4 Features

Verify BGP4+ on IPv6 Protocol Stack

The BGP-4+ software can establish one or more BGP4+ peering sessions between IPv6 end-points. Verify your IPv6 protocol stack can support multiple BGP4+ peering sessions.

Advertise, Withdraw and Flap IPv6 routes and verify BGP4+ signaling function

Advertise, withdraw and flap IPv6 routes, using the multi-protocol extensions to BGP-4. IPv6 Routes can be associated with BGP4+ sessions on either an IPv4 or IPv6 Protocol Stack.

Verify BGP4+ Scalability and Correctness

The Agilent IPv4 and IPv6 Routing solutions offer the most scalable cost-effective emulation solution over the broadest set of interfaces. Fewer ports, and the lowest total investment, are required to find the scalability limits of the Device or Network under test.

BGP-4+ Technical Specifications

This section contains the BGP-4+ IPv6 features of the IPv6 Routing Emulation software that are accessible using the GUI and Tcl/TK scripting environment.

BGP+ Emulation Parameters

IPv6 Peering Sessions	IBGP, EBGP & Multihop
Messages Supported	Open Update Notification KeepAlive Route Refresh
Connection Establishment	Active or Passive

BGP4 Session Parameters

The tester can simulate multiple BGP4 peers. Each simulated peer corresponds to a BGP4+ session. Each session has the following parameters:

Session Address	IPv6 Address (Link Local or Global/Site Scope)
AS Number Range	0 to 65,535
Neighbor Address	IPv6 Address
BGP Identifier	<Any IPv4> Address
Hold Timer	0 to 3 to 65,535 seconds
Connection Retry	10 to 300 Seconds
Route Update	0 to the maximum number of NLRI routes to the maximum UPDATE message size of 4,096 bytes
Inter Update Delay	1 - 10,000 ms
KEEPALIVE Timer Value	User defined in ms units between 0 and 65,535 seconds
Capability	Advertises support for multi-protocol extensions for IPv6 Address Family

IPv6 Route Generation

An arbitrary number of routes can be assigned to each BGP-4 peer. The entire IPV6 address space may be used. Each UPDATE message may contain an arbitrary number of IPv6 Routes encoded in the MP_REACH_NLRI or MP_UNREACH_NLRI Path Attribute, up to a maximum UPDATE message size of 4,096 bytes.

Maximum Update Message Size	4,096 bytes
Prefix Range	2-128
IPv6 Route Profiles	Abstraction allows a large number of routes to be advertised, withdrawn and flapped across multiple BGP-4 peers.

Attributes

AS_PATH with one or more of:
AS_SEQUENCE
AS_SET
CONFED_SET
CONFED_SEQUENCE
Each containing a list of AS#s.
ORIGIN
NEXT_HOP
MULTI_EXIT_DISC
LOCAL_PREFCOMMUNITIES
ATOMIC_AGGREGATE
AGGREGATOR
CLUSTER_LIST
ORIGINATOR_ID
MP_REACH_NLRI
MP_UNREACH_NLRI

Notification

Configure the following Notification Message Fields.

Error Code	User-defined, 0-255
Error Subcode	User-defined, 0-255

Route Flapping

Configure your route flapping tests. Advertise and withdraw IPv6 Routes information dynamically to measure the performance and verify ability to forward packets during network changes.

Advertise to withdraw delay	1ms to 120 seconds
Withdraw to advertise delay	1ms to 120 seconds
Inter-Update delay	0 to 10,000ms

Statistics

Statistics are collected over the duration of the BGP-4+ peer session. These statistics are updated as packets are transmitted and received. The statistics are not subject to the sampling interval and measurement interval processing associated with the real-time forwarding statistics. Numerical, graphical and snapshot save-to-file representations are available.

Notification Received	Number of Notification messages received
NLRI Received	Number of NLRI messages received Includes multi-protocol routes in MP_REACH_NLRI attribute
NLRI Transmitted	Number of NLRI messages transmitted. Includes multi-protocol routes in MP_REACH_NLRI attribute
OPEN Received	Number of OPEN messages received
KEEPALIVE Received	Number of KEEPALIVE messages received
UPDATE Received	Number of UPDATE messages received
OPEN Transmitted	Number of OPEN messages transmitted
KEEPALIVE Transmitted	Number of KEEPALIVE messages transmitted
NOTIFICATION Transmitted	Number of NOTIFICATION messages transmitted
Flow Control Event	Number of times TCP flow control occurred while attempting to send update messages
Total Flow Time	Duration in ms the TCP window was closed while attempting to send update messages
Unfeasible (withdrawn routes) Received	Number of Unfeasible routes received. Includes multi-protocol routes in MP_UNREACH_NLRI attribute
Unfeasible (withdrawn routes) Transmitted	Number of Unfeasible routes transmitted. Includes multi-protocol routes in MP_UNREACH_NLRI attribute
Duration	Length of time the connection has been up

Applicable BGP-4+ Standards

The BGP-4+ solution extends on the standards already supported by the BGP-4 IPv4 solution. The following standards are relevant to the BGP4+ IPv6 extensions:

- Multi-protocol Extensions for BGP-4, RFC 4760
- Capabilities Advertisement with BGP-4, RFC 3392
- Carrying label information in BGP-4, RFC 3107
- Connecting IPv6 islands across IPv4 clouds with BGP, draft-ietf-ngtrans-bgp-tunnel-04
- Protection of BGP Sessions via the TCP MD5 Signature Option, RFC 2385

OSPFv3 Overview

Agilent N2X IPv6 Routing Emulation software provides a comprehensive set of capabilities for testing OSPFv3 implementations. Each N2X XR port can simulate one or more OSPFv3 neighbors, each with the independent ability to advertise link state information for IPv6 routers, networks and areas. Large numbers of Link State Advertisements can be flooded into the switch, router or network under test, building immense and complex forwarding tables within these devices. This provides a valuable tool for verifying the scalability, functionality, and robustness of the OSPFv3 implementation under realistic conditions.

OSPFv3 Features

Verify OSPFv3 Implementations

OSPFv3 is a new version of OSPF developed explicitly to support IPv6. OSPFv3 operates over an IPv6 capable protocol stack. Like any new protocol, OSPFv3 presents challenges to network equipment vendors and service providers to ensure the protocol is ready for deployment in a product network. The OSPFv3 solution provides the mechanisms to stress the function, scalability and robustness of the OSPFv3 implementation.

Rapid configuration of Link State Topology

Using the GUI or Tcl API the user is able to rapidly configure a large IPv6 topology with many simulated routers, networks and areas, without being an expert in the underlying protocol. The user simply adds IPv6 network elements and connects them together. The N2X protocol emulation will automatically build, advertise and withdraw the required LSAs based on the requested topology. Define complex OSPF router topologies using predefined patterns, such as a Grid, Star, Ring, Tree or Mesh.

Simulate real world environments

The OSPFv3 emulation can be used in combination with other IPv6 and IPv4 protocols. For example, OSPFv3 may be combined with BGP-4+ emulation capabilities to verify the correct propagation of external reachability information.

OSPFv3 Technical Specifications

This section contains the OSPF features of the IPv6 Routing Emulation software that are accessible using the GUI and Tcl/TK scripting environment. Simple point and click actions enable you to dynamically change the environment being tested.

Emulation

LSA Types	1: Router-LSA 2: Network-LSA 3: Inter-Area-Prefix-LSA 4: Inter-Area-Router-LSA 5: AS-External-LSA 7: Type 7 (NSSA) 8: Link-LSA 9: Intra-Area-Prefix-LSA
Router Types	Intra-Area Routers, Area Border Routers, AS Border Routers
Network Types	Point-to-Point Broadcast Point-to-MultiPoint Non Broadcast Multiple Access (NBMA)
Messages Supported	Hello Database Description Link State Request Link State Update Link State Acknowledgement
Protocol Operations	Neighbor Discovery DR/BDR Election Database Synchronization Reliable Flooding

The software can support multiple OSPFv3 neighbors each simulating an adjacent OSPFv3 Router. These are called OSPFv3 sessions.

OSPFv3 Parameters

Session Parameters	Router ID (IPv4 Address) Area ID (IPv4 Address) Interface Addresses(IPv6) • Link Local • Global Scope Link Type Options (N bit, E bit)
Timers	Hello Interval Poll Interval Router Dead Interval Retransmission Interval Transit Delay
Options	Max LSAs per UPDATE Interface Cost Router Priority Instance ID

Interface States	Down Waiting Point to Point DR Other Backup DR
Neighbor States	Down Attempt Init 2-Way ExStart Exchange Loading Full

OSPFv3 Topology Generation

The OSPFv3 emulation supports an intelligent topology builder. The topology builder allows the user to build up a topology of network elements such as routers, networks, areas etc and describe the connections between the elements. The emulation software will then create and advertise the required OSPF LSAs. This enables a user, with limited OSPF expertise, to quickly and easily define a valid OSPF topology. Building a topology from raw LSAs is time consuming and error-prone; the Agilent N2X OSPFv3 emulation software does all the work.

Router Patterns

The OSPF emulation supports the simulation of different router patterns:

- Grid
- Star
- Ring
- Mesh
- Tree

Create large and complex simulated OSPF topologies quickly and easily by connecting multiple router patterns.

Topology Objects

The user will be able to add / edit / remove the following topology objects to an adjacency:

- OSPF Router Patterns
- OSPF IPv6 Router
- OSPF IPv6 Network
- OSPF IPv6 Inter-Area Route Pool
- OSPF IPv6 Inter-Area Router
- OSPF IPv6 External Route Pool

Two topology objects can be connected together to form a link. The following objects can be connected:

- Router to Router
- Router to Network
- Inter-Area Route Pool to Router (ABR)
- Inter-Area Router to Router (ABR)
- External Routes to Router (ASBR or ABR)

Connections between objects can be made across different OSPF adjacencies to connect together disjoint topologies behind two test ports to create a larger common topology without needing to advertise the same LSAs from both adjacencies.

OSPF statistics collected for each OSPF session

- Number of OSPF HELLO messages received
- Number of OSPF HELLO messages sent
- Number of OSPF DB DESCRIPTION messages received
- Number of OSPF DB DESCRIPTION messages sent
- Number of OSPF LINK STATE REQUEST messages received
- Number of OSPF LINK STATE REQUEST messages sent
- Number of OSPF LINK STATE UPDATE messages received
- Number of OSPF LINK STATE UPDATE messages sent
- Number of OSPF LINK STATE ACK messages received
- Number of OSPF LINK STATE ACK messages sent
- Number of OSPF LSAs received (for each supported LSA type)
- Number of OSPF LSAs sent (for each supported LSA type)

Applicable OSPF Standards

The OSPFv3 solution is separate from the existing OSPFv2 IPv4 solution.

The following standards are relevant to the OSPFv3 for IPv6 capabilities:

- OSPF for IPv6, RFC 2740

IS-ISv6 Overview

Agilent N2X IS-ISv6 Routing Emulation software provides a comprehensive set of capabilities for testing IPv6 IS-IS implementations. Each N2X port can simulate one or more IS-IS routers, each with the independent ability to advertise L1/L2 link state information for IPv4 and/or IPv6 routers and networks. Large numbers of Link State PDU's can be flooded into the router or network under test, building immense and complex forwarding tables within these devices. This provides a valuable tool for verifying the scalability, functionality, and robustness of the DUT IPv6 IS-IS implementation under realistic conditions.

IS-ISv6 Features

Verify IS-ISv6 Implementations

Although IS-IS is an easily extensible protocol, the IPv6 IS-IS extensions require thorough testing for functionality, scalability and performance. Like any new protocol, implementing IS-IS to exchange IPv6 routing information presents challenges to network equipment vendors and service providers to ensure the protocol is ready for deployment in a product network. The Agilent IS-ISv6 solution provides the mechanisms to stress the functionality, scalability and robustness of the DUT implementation.

Rapid Configuration of Link State Topology

Using the GUI or Tcl API the user is able to rapidly configure a large IPv4 and/or IPv6 topology with many simulated routers, networks and areas, without being an expert in the underlying protocol. The user simply adds IPv6 network elements on their own, or in combination with IPv4 elements and connects them together. The Agilent software will automatically build, advertise and withdraw the required LSPs based on the requested topology. Multi Topology ISIS is also supported on a per-router and on a per-router-grid basis.

Simulate Real World Environments

The IS-ISv6 emulation can be used in combination with other IPv6 and IPv4 protocols. For example, IS-ISv6 may be combined with BGP-4+ emulation capabilities to verify the correct propagation of external reachability information.

IS-ISv6 Technical Specifications

This section contains the IS-IS features of the IS-ISv6 Routing Emulation software that are accessible using the GUI and Tcl/TK scripting environment. Simple point and click actions enable you to dynamically change the environment being tested.

Emulation

Reachability	Advertise <ul style="list-style-type: none"> • IPv6 addresses • IPv4 addresses • Both concurrently
Router Types Supported	IIH (LAN & P-to-P) CSNP PSNP LSP ISH

Network Types Supported Sub-interfaces like (VLAN and ATM PVC)	Point-to-point, Broadcast NBMA
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The software can support multiple IS-ISv6 speakers each simulating an adjacent IS-ISv6 Router. These are called IS-ISv6 sessions.

Session Parameters

IS-IS Packet Headers are generated automatically for each simulated router. The user for the automatically generated packets may assign the following parameters.

Session Parameters (IPv6, IPv4 or both)	Area ID / List System ID /List Interface Addresses
Timers	Holding IIH Interval CSNP Interval PSNP Interval
Options	Maximum PDU size L1 Router Priority L2 Router Priority Routing Level (L1, L2, L1/L2)

Adjacency States

As the simulation progresses the following states are viewable:

- Up Normal
- Up Designated Router
- Wait Normal
- Wait Designated Router
- Initializing
- Down

Grid Operations

Operations Supported	Advertise Node (r, c) Withdraw Node (r, c) Advertise Link (r, c, link) Withdraw Link (r, c, link)
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IS-ISv6 Topology Generation

The IS-ISv6 emulation supports an intelligent topology builder, allowing users to build up a topology of network elements such as routers, networks, etc and describe the connections between the elements. The topology builder uses the notion of a regular grid defined by rows and columns, with an optional emulated router at the intersection of each row and column (ie at each node). Additional network elements can also be added to create additional topologies. The emulation software will then create and advertise the required IS-IS LSPs.

Simulated Topology

The IS-ISv6 implementation emulates the following topology objects, and includes MT-ISIS:

Routers	Source of generated LSPs
Networks	List of reachable IPv4 and/or IPv6 prefixes
Router Grids	Up to a 20x20 Grid of Routers

Topology Objects

The user will be able to add/edit/remove the following topology objects to an adjacency:

- IPv4 and/or IPv6 IS-IS Router
- IS-IS IPv4 and/or IPv6 Network

Routers can be connected to:

- Other Routers
- IPv4 and/or IPv6 Networks

Connections between objects can be made across different IS-IS adjacencies to connect together disjoint topologies behind two test ports to create a larger common topology without needing to advertise the same LSPs from both adjacencies. Once a topology object has been added the corresponding LSPs will be available in the list of simulated LSPs. These automatically generated LSPs will be locked for removal and will not be directly editable.

Statistics collected for each IS-IS session

- Number of ISIS HELLO messages received (L1 and L2)
- Number of Point-to-point Hellos sent and received
- Number of LSPs sent and received (L1 and L2)
- Number of CSNP's sent (L1 and L2)
- Number of PSNP's sent (L1 and L2)
- L1 database size
- L2 database size

Statistics collected for each IS-IS session

Agilent N2X IS-ISv6 solution is separate from the existing IS-IS IPv4 solution. The following standards are relevant to the Agilent IS-ISv6 solution:

- IS-IS Intra Domain Routing Protocol, ISO/IEC 10589
- Use of OSI IS-IS for Routing in TCP/IP and Dual Environments, RFC 1195
- Routing IPv6 with IS-IS, draft-ietf-isis-ipv6-05
- M-ISIS: Multi Topology (MT) Routing in IS-IS, draft-ietf-isis-wg-multi-topology-06
- Intermediate System to Intermediate System (IS-IS) Extensions for Traffic Engineering (TE), RFC 3784
- Restart Signaling for Intermediate System to Intermediate System (IS-IS), RFC 3847

RIPng Overview

Agilent N2X IPv6 Routing Emulation software provides a comprehensive set of capabilities for testing RIPng implementations. This software provides the ability to emulate and measure the impact of dynamic route changes on the forwarding performance of IPv6 capable routers and networks. By emulating multiple RIPng sessions, the emulation capabilities build a realistic network cloud around the IPv6-capable router under test. Any number of routes with a flexible range of attributes can be advertised into the router or network under test.

RIPng Features

Verify RIPng on IPv6 Protocol Stack

The RIPng emulation software can establish one or more RIPng sessions between IPv6 end-points. Verify that the DUT IPv6 protocol stack can support multiple RIPng sessions.

Advertise, Withdraw and Flap IPv6 routes and verify RIPng signaling function

Advertise, withdraw and flap IPv6 routes to simulate realistic network conditions.

Verify RIPng Scalability and Correctness

The Agilent NX2 IPv4 and IPv6 Routing solutions offer the most scalable cost-effective emulation solution over the broadest set of interfaces. Fewer ports, and the lowest total investment, are required to find the scalability limits of the Device or Network under test.

RIPng Technical Specifications

This section contains the RIPng features of the IPv6 Routing Emulation software that are accessible using the GUI and Tcl/TK scripting environment.

Emulation

Reachability Advertise IPv6 addresses

Messages Supported Request Response

Session Parameters

The tester can simulate multiple RIPng routers. Each simulated router corresponds to a RIPng session. Each session has the following user specifiable parameters:

Session Address	IPv6 Address
Router ID	32 bits
Address	Ipv6 Address
Metric	0-16
Expiration Timer	Default 180 000 ms
Garbage Interval	Default 120 000 ms
Update Interval	Default 30000 ms
Triggered Interval	Random (User specified limit - default 5000 ms)
Update Control	Choice Of: <ul style="list-style-type: none"> • Poisoned Reverse • Split Horizon • No horizon control • Light weight control

IPv6 Route Generation

An arbitrary number of routes can be assigned to each RIPng router. The entire IPV6 address space may be used. Each message may contain up to 25 IPv6 Routes.

Prefix Range	2-128
IPv6 Route Pools	Pool Abstraction allows a large number of routes to be advertised, withdrawn and flapped together. Route Pool definition includes: <ul style="list-style-type: none"> • First Route • CIDR Prefix • Num Routes • Increment Each pool has a set of user-defined attributes.

Route Flapping

Configure your route flapping tests. Advertise and withdraw IPv6 Routes information dynamically to measure the performance and verify ability to forward packets during network changes.

Advertise to withdraw delay 1 - 120 seconds

Withdraw to advertise delay 1ms to 120 seconds

Inter-Update delay 0 to 10,000ms

Statistics

Statistics are collected over the duration of the RIP session. These statistics are updated as packets are transmitted and received. The statistics are not subject to the sampling interval and measurement interval processing associated with the real-time forwarding statistics. Numerical, graphical, and snapshot "save to file" representations are available.

Statistics collected for each RIPng session

Session Duration in dd: hh: mm: as

Response Messages	The number of messages sent or received
Request Messages	The number of request messages sent or received
Unfeasible Neighbors	The number of withdrawn routes placed in or taken to send from the routing table by the neighbors
Unfeasible Simulated	Number of withdrawn routes simulated, placed in, or taken to send from the routing table (simulated router)
Neighbor Routes	The number of advertised routes placed in or taken to send from the routing table by the neighbor
Simulated Routes	Number of simulated routes placed in or taken to send from the routing table (simulated router)

Applicable RIP Standards

RIPng builds on the RIP specification described in RFC1058 and RFC1723. The following standards are relevant to the RIPng IPv6 extensions:

- RFC 2080 (1997) RIPng for IPv6

Additional N2X Features

Easy to use Graphical User Interface

The graphical user interface provides simple point and click features to dynamically define your sessions and generate routes and peers, quickly emulating a BGP-4, OSPF, IS-IS or RIP environment.

Flexible, powerful scripting

Automated scripts are quickly created using the Tcl/Tk scripting environment. With only a few lines of code, thousands of networks are easily advertised from simulated peers on any or all ports.

Online Help

An extensive online help system provides complete descriptions and detailed usage instructions. Dialog-level context-sensitive help provides rapid access to the relevant sections of the online help. A technology reference section provides a complete library of background information pertaining to router and switch performance testing.

Determine router convergence times

Precisely measure the ability of a router to withstand route flap "storms" as well as the time it takes for a router to converge new routes. How much user data is lost when a route changes? Agilent N2X enables you to benchmark a network or router with realistic 'real-life' tests to gauge its performance when deployed in the real world.

Generate wire speed traffic

With N2X Packets and Protocols application's wire speed traffic capability you can generate a complex, real-world mix of traffic whilst simultaneously testing the routing functionality. For example, the data forwarding performance of a router can be measured while simultaneously flooding OSPF Link States to it. The ability of a router to withstand Link State flooding as well as the time it takes for a router to converge on new routes can be precisely measured.

Configuration and Ordering Details

To use the E7885A IPv6 Routing Emulation software, Agilent N2X hardware and software is required.

Hardware

A N2X system is required with:

- System controller
- Chassis
- Interface cards

E7885A IPv6 Routing Emulation software is supported on all N2X XR cards and XS cards. The N2X XS cards offer up to 2 times the protocol scalability of the XR cards.

E7885A IPv6 Routing Emulation software is NOT supported on N2X XP cards.

Software

Required software packages are as follows:

- E7880A Packets Application Software
- E7881A Packets and Protocols Application Software
- E7882A IPv4 Routing Emulation Software

The E7885A IPv6 Routing Emulation product is dependent on the E7882A IPv4 Routing Emulation, and requires that the E7882A also be installed and licensed on the same controller. i.e. A customer who purchases the E7885A IPv6 software must also purchase the E7882A IPv4 software.

Your local Agilent field engineer can provide full details of this functionality.

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Agilent N2X

Agilent's N2X multi-service tester combines leading-edge services with carrier grade infrastructure testing and emulation. The N2X solution set allows network equipment manufacturers and service providers to more comprehensively test new services end-to-end, resulting in higher quality of service and lower network operating costs.

Software and Support Agreement

To protect your investment in the Agilent N2X, every new system includes an initial 12-month comprehensive system-based warranty and Software and Support Agreement (SSA).

Renewing Agilent support services ensures uninterrupted technical support and software upgrades, giving you confidence in N2X throughout the life of your system.

The N2X technical support portion of your SSA includes assistance with product operation and measurements, and verification that the N2X equipment is in correct working order.

Warranty and Support

Hardware Warranty

All N2X hardware is warranted against defects in materials and workmanship for a period of 1 year from the date of shipment.

Software Warranty

All N2X software is warranted for a period of 90 days. The applications are warranted to execute and install properly from the media provided.

This warranty only covers physical defects in the media, whereby the media is replaced at no charge during the warranty period.

Ordering Information

To order and configure the test system, consult your local Agilent field engineer.

Sales, Service and Support

N2X must be serviced by an approved Agilent Technologies service centre, please contact us for more information.

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