IPNetSim™ – IP Network/ WAN Emulator (100Mbps, 1Gbps, 4Gbps)

Measures network latency, jitter, attenuation, packet errors, and bit errors

Emulate latency (delay) in either direction in constant/ normal/ uniform distribution

Emulate bit error rates as low as 1x10-14

Gigabit Ethernet Interfaces

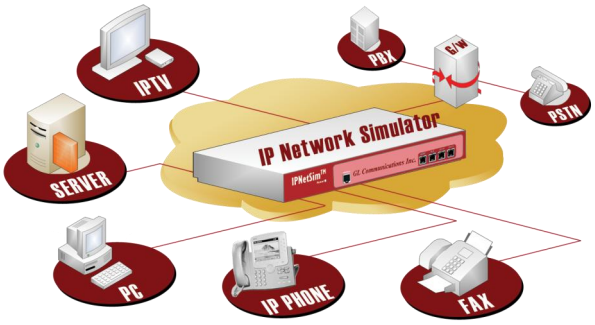
Dynamically simulates changing WAN conditions

Simulates link bandwidth with microseconds resolution

Bit error rate calculations with 256-bit precision

Ideal for automated product testing

Handle anomalous conditions with packet reordering & duplication



Overview

IPNetSim™ simulates all the conditions encountered in a real-time such as network latency, network delay variation (jitter), bandwidth, congestion, packet errors, bit errors and other link impairments independently in both directions. IPNetSim™ models are available at varying capacities from 100 Mbps copper, 1 Gbps Ethernet, up to 4 Gbps Ethernet/SFP, or up to 40 Gbps with Dual Rate 1 Gbps/10 Gbps SFP+ interfaces. The IPNetSim™ 1Gbps model can emulate up to 4 separate individual links simultaneously to an aggregate throughput of 4 Gbps, making it ideal for both multi-link configurations and multi-user labs. The IPNetSim™ IPN600 series offers 1/10 Gbps dual rate capability with four dual rate 1/10 Gbps SFP+ ports, supporting both 10 Gbps SFP+ and 1 Gbps SFP. With a capacity of 40 Gbps, the IPNetSim™ IPN600 series Network Emulator can simulate two separate 10 Gbps full-duplex links. For more information on IPNetSim™ IPN600 series, visit www.gl.com/ipnetsim-10g-network-emulator.html webpage. It can be used to test IP end point devices such as Gateways, IADs, IP phones, Soft phones, & so on for voice, fax, data, or multimedia transmission over IP. IPNetSim™ offers an efficient way to emulate terrestrial, wireless, internet, satellite, or private network links to troubleshoot networks and applications under a spectrum of real-world conditions. For more details, please refer to www.gl.com/ipnetsim.html.

Application Supported

- Network Validations: Evaluate how bandwidth, delay, jitter, and loss affect networks.
- Equipment/ Application/ QA Testing: Use IPNetSim™ to find out how network equipments, IPTV, software, remote storage, and client/server based applications perform with varied conditions.
- Website Performance: Verify the responsiveness of your website & e-commerce systems
- VoIP: Verify quality requirements to deploy VoIP in real-world conditions.
- Product Demonstrations: Demonstrate on customer sites and trade show avoiding the hassles of actually installing on a production network.

Main Features

- Emulates WAN bandwidths of up to 100 Mbps, 1Gbps, or up to 4Gbps depending on the product type. With a packet-processing rate of 250,000 packets per second or higher, the IPNetSim™ can easily handle 45 Mbps of 64-byte packets in each direction.
- Emulate latency in constant, normal or uniform distribution in either direction (1ms to 10s). Specified loss can be packet loss rate, bit error rate, or both.
- Provides a visual display of the current traffic conditions, including throughput graphs, and transmission and loss statistics
- Simulates link bandwidth with microseconds resolution and performs bit error rate probability calculations with 256-bit values to ensure correct, precise, and accurate error distribution
- IPNetSim™ Player works with Recorder utility to record and report the delay and loss characteristics of a live link
- Copper and Fiber Gigabit Ethernet interfaces makes it easy to simulate a WAN without routers, or other costly equipments. Independent pairs of Ethernet interfaces for each link make configuration of multiple links as easy as a single link.

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System Configuration

IPNetSim™ can be installed between two LAN segments. Depending on the configuration, it acts as either a bridge / router between the Ethernet segments. This can be used with IPv6, IPX, AppleTalk, SCPS, and proprietary network and transport layer protocols.

User Interface

The IPNetSim™ is configured using a simple browser-based interface. Provides all link emulation parameters such as Bandwidth, Delay, Loss, and more. Settings in this screen help the end user to use the IPNetSim™ function as a bridge or router.

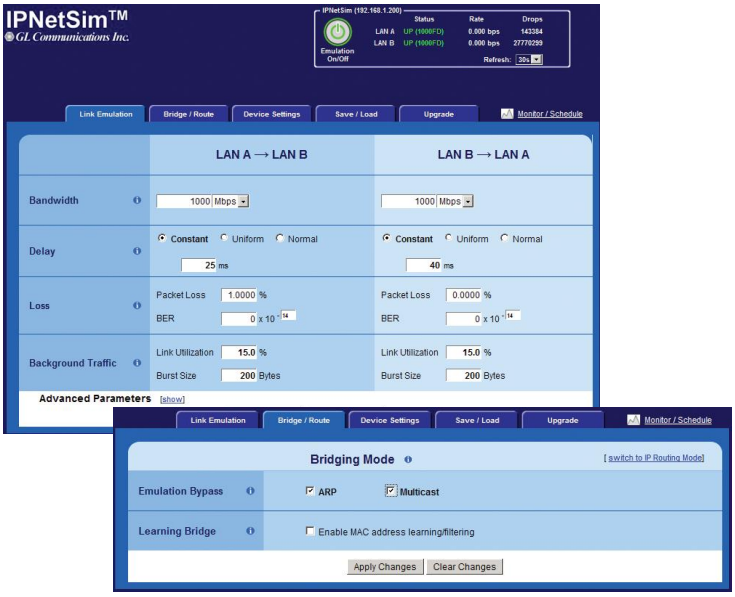

Figure: Link Emulation, and Bridge/Router Configuration

IPNetSim™ Player and Recorder

The Recorder collects delay and loss statistics for the network path between the PC on which the IPNetSim™ Player is running and the specified remote device.

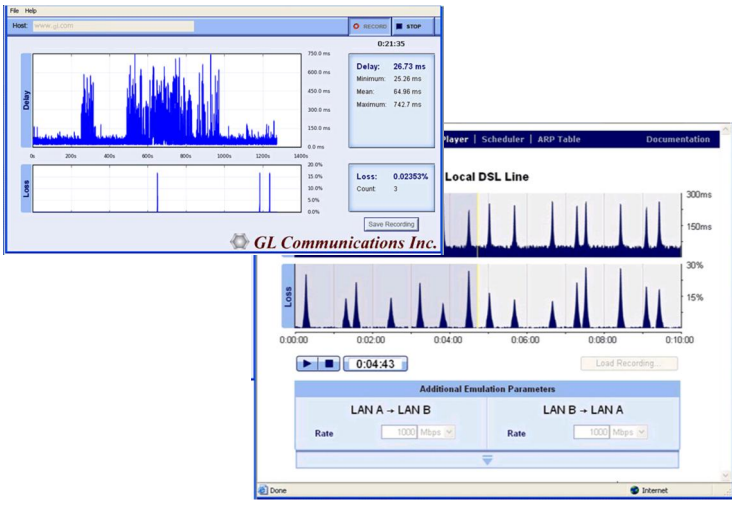

Figure: IPNetSim™ Player and Recorder

Monitor / Scheduler

The Monitor window displays real-time statistics and throughput graphs of the traffic over the emulated link. For each direction, there is a table of statistics, graph of the transmission rate, and a table of average transmission rates. Scheduler is used to configure dynamically changing emulation parameters or automate a series of separate tests.

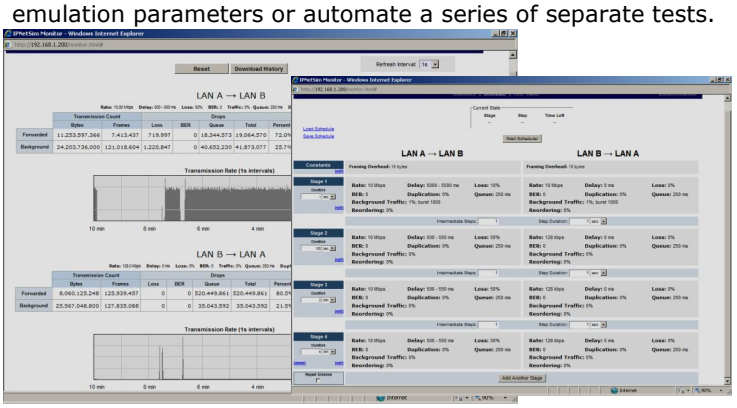

Figure: Monitor/Scheduler Window

Buyer's guide

IPN010 – IPNetSim™ – 100 Mbps, 2 ports (1 Link)

IPN100 – IPNetSim™ – 1 Gbps, 2 active ports (1 Link)

IPN400 – IPNetSim™ – 4 x 1 Gbps, 8 active ports (4 Links)

Related Hardware

IPN601 – IPNetSim™ – 1000/100/10 Mbps, 4 ports

IPN610 – IPNetSim™ – 10,000 / 1000 / 100 / 10 Mbps, 4 ports

IPN800 – SFP for GigE Optical

IPN801 – SFP for GigE Electrical

Related Software

PKV100 – PacketScan™ (Online and Offline)

PKS100 – PacketGen™ (includes PacketScan™)

PXE100 – PacketExpert™

ETH100 – PacketCheck™

PKV170 – PacketScanWeb™

PKS120 – MAPS SIP™

PKS122 – MAPS™-MEGACO

PKS124 – MAPS™-MGCP

PKS126 – MAPS™-SIP-I

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