

PacketStorm8XG

IP Network Emulator

“Providing the Internet in a box”



Features and Description:

The PacketStorm IP Network Emulators reproduce the unfavorable conditions of IP Networks and WANs in a controllable and repeatable lab setting. The emulator recreates the dynamic behavior of the Internet such that any network model can be reproduced including those models that change with traffic, time, or the behavior of another traffic flow.

PacketStorm8XG

- Line Rate Performance
- Four Slots with up to 6 Ports
- Ethernet Interfaces: 10G / 25G / 100G

Video Applications:

The PacketStorm8XG addresses the following video applications such as: FEC Aware Matrices, Hitless / Seamless Protection Switching, Active Video, PTP, SMPTE 2022 1/2 and 5/6, SMPTE 2059, SMPTE 2110 20/30/40, VSF TR-03 and TR-04, AES67, and RFC4175.

Impairments:

- Delay
- Jitter
- Drop
- Decimate
- Duplicate
- Re-order
- Throttle
- Burst Drop
- Bit Error
- RTP Sequence Drop
- FEC Aware
- Active Video
- Low Latency
- Transparent Switch

Modifiers:

- Source Address
- Destination Address
- DSCP
- TTL
- Protocol
- Source Port
- Destination Port
- VLAN
- MAC
- IPv6
- Timestamp Offset
- Discontinuities
- Universal

Filters:

- Source & Destination Address
- Source & Destination Port
- Protocol
- MPLS
- VLAN
- MAC
- Universal
- Bit Pattern
- IPv6
- RTP
- FEC Aware
- Active Video
- All Frames

Statistics:

- Bandwidth
- Loss
- Bytes
- Packets



Graphical User Interface

The PacketStorm8XG uses tabs and two sections to simplify the Graphical User Interface (GUI) and be able to make network models easily. The top section displays the different tabs and parameter settings. The bottom section displays the present network model and its settings.

The screenshot shows the PacketStorm8XG GUI. At the top, there are tabs for Links, System, Statistics, and Plots. Below the tabs, there are sub-tabs for Filters and Impairments. The Filters section is active, showing two main panels: Source and Destination. The Source panel includes fields for Name, Side (B), Tags, # VLAN (0), and Filters (All Frames, IPv4, MAC, IPv6, VLAN, RTP, Show Universal Filter View). The Destination panel includes fields for Name, Side (A), IPv4, Destination Address (192.168.1.2), Network Mask (255.255.255.255), and Destination Port (0). Below these panels, there are buttons for Update Link 2, Cancel, and Show Only Enabled Links. The bottom section shows Slot 1 with two links: Link 1 (A to B) and Link 2 (B to A). Each link has a sequence of impairments: Delay, Jitter, Drop, and BW Probe.

Statistics

When emulation is started, the PacketStorm8XG automatically changes the top section to the Statistics Tab. In addition, to the various statistics displayed, the Statistics Tab contains the control and status of the Hitless feature for video applications.

The screenshot shows the PacketStorm8XG GUI with the Statistics tab selected. At the top, there are tabs for Links, System, Statistics, and Plots. The Emulation Time is 00:02:49. The Statistics section is divided into several panels. The first panel shows Port Tx/Rx Data Rate (Mbits/sec) for Side A and Side B. The second panel shows Statistics for Slot 1, including Transmit and Receive Stats for Side A and Side B. The third panel shows the Hitless Feature section with a Start Hitless Slot 1 button.

Port	Transmit (Mbits/sec)	Receive (Mbits/sec)
Side A:	0.00	616.20
Side B:	616.20	0.00

Side	Transmit Stats	Receive Stats
Side A:	Total Bytes: 0 Total Packets: 0	Total Bytes: 12,984,490,800 Total Packets: 9,533,200
Side B:	Total Bytes: 12,987,056,808 Total Packets: 9,535,084	Total Bytes: 0 Total Packets: 0

Side	Transmit Stats	Receive Stats
Side A:	Broadcast: 0 Multicast: 0 Oversized: 0 VLAN: 0	Broadcast: 0 Multicast: 56,552.96 Oversized: 0 VLAN: 0
Side B:	Broadcast: 0 Multicast: 56,732.5 Oversized: 0 VLAN: 0	Broadcast: 0 Multicast: 0 Oversized: 0 VLAN: 0

Control of Hitless Feature:
Start Hitless Slot 1