

# 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 8 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 'Filters' and 'Impairments' section of the PacketStorm8XG GUI. At the top, there are tabs for 'Links', 'System', 'Statistics', and 'Plots'. Below the tabs, there are two main panels: 'Source' and 'Destination'. The 'Source' panel includes fields for 'Name', 'Side', 'Tags', '# VLAN', and 'Filters' (All Frames, IPv4, MAC, IPv6, VLAN, RTP). The 'Destination' panel includes fields for 'Name', 'Side', 'IPv4', 'Destination Address', 'Network Mask', and 'Destination Port'. Below these panels, there are buttons for 'Update Link 2', 'Cancel', and 'Show Only Enabled Links'. The 'Filename' field shows 'New File\*\*'.

## 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 'Statistics' section of the PacketStorm8XG GUI. At the top, there are tabs for 'Links', 'System', 'Statistics', and 'Plots'. The 'Statistics' tab is active, displaying 'Emulation Time: 00:02:49'. Below the tabs, there are three main sections: 'Port Tx/Rx Data Rate (Mbits/sec)', 'Statistics for Slot 1', and 'Control of Hitless Feature'. The 'Port Tx/Rx Data Rate' section shows transmit and receive rates for Side A and Side B. The 'Statistics for Slot 1' section shows transmit and receive statistics for Side A and Side B, including Total Bytes, Total Packets, Broadcast, Multicast, Oversized, and VLAN counts. The 'Control of Hitless Feature' section includes a 'Start Hitless Slot 1' button.

	Transmit	Receive
Side A:	0.00	616.20
Side B:	616.20	0.00

Side	Transmit Stats	Receive Stats
Side A:	Total Bytes: 0	Total Bytes: 12,984,490,800
Side A:	Total Packets: 0	Total Packets: 9,533,200
Side B:	Total Bytes: 12,987,056,808	Total Packets: 9,535,084
Side B:	Broadcast: 0	0
Side B:	Multicast: 56,732.5	0
Side B:	Oversized: 0	0
Side B:	VLAN: 0	0
Side B:	CRC Errors: 0	0
Side B:	Runts: 0	0
Side B:	Fragments: 0	0