maXtap™

Traffic Bypass Switch

Features…

- *Network outage protection for security appliance failures or upgrades*
- *Intelligent heartbeat monitoring and customization*
- *Dynamic load balancing between security devices*
- *Remote management via Web or Telnet/SSH*
- *Enables application flexibility with removable modules*
- *Easy configuration with default profiles*

Benefits…

- *Eliminates network outages due to appliance failures or upgrades*
- *Enables real-time, constant monitoring of security appliances*
- *Reduces traffic congestion on a single device with intelligent load balancing*
- *Provides multiple options for remote access*
- *Simplifies configuration for rapid turn-up*

Device and Network Protection

Networks are only as secure and robust as we make them. To ensure that your network continues to run smoothly in the event of an appliance failure or an out-of-service upgrade to the security appliance, a bypass switch is required. Bypass switches sit between the security appliance and the network to bypass or reroute traffic from the internet straight to the LAN, eliminating network packet loss and downtime.
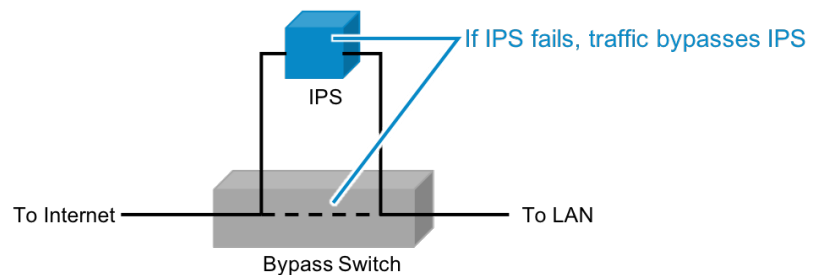

Figure 1:Bypass Switch

Dynamic Security Policies

OptiX2's maXtap™ Bypass Switch provides flexible bypass and traffic management options. The Bypass switch can be configured to receive dynamic policy information from a security appliance such as an anti-DDoS appliance through its web service interface. This allows the 'mirrored" traffic forwarded by the bypass switch to the anti-DDoS appliance to be scrubbed and then reinserted in the traffic flow. This process is more simple than traditional schemes, such as BGP route injection, and it is less dependent on the network, while increasing reliability.
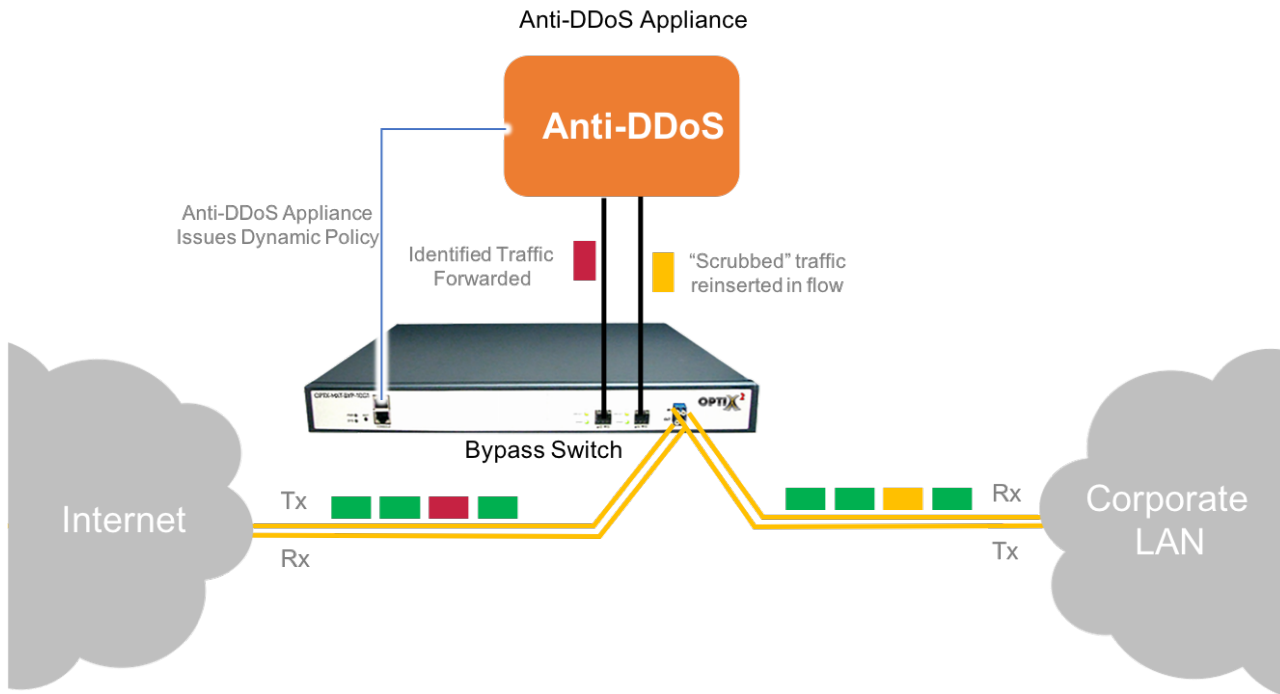
Figure 2: Dynamic Policy Application

OptiX²'s maXtap™ Traffic Bypass Switch enables traffic to be routed around security appliance failures and upgrades to ensure your network is not impacted. Each maXtap™ Bypass Switch listens for the security appliance's "heartbeat" to determine its current status. When the maXtap™ Bypass Switch fails to hear the "heartbeat", it switches traffic from the internet-facing adapters to the LAN-facing adapters to bypass the security appliance outage.
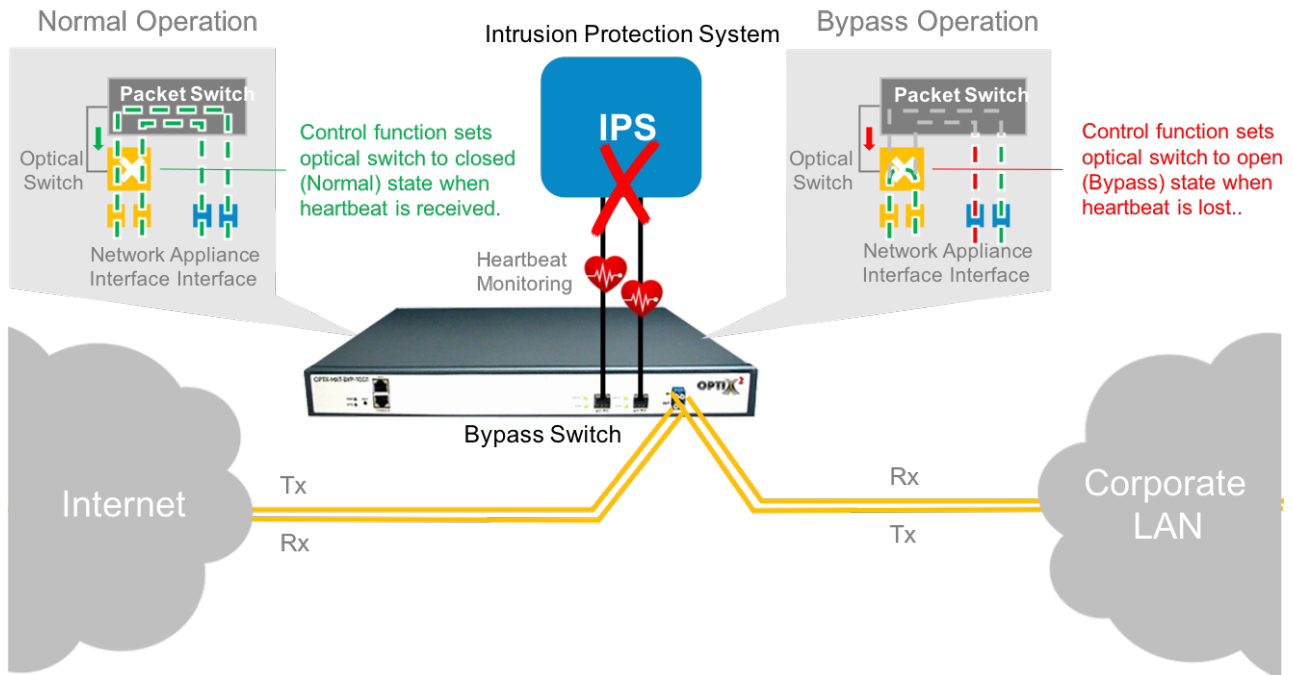

Figure 3: Normal vs Bypass Operation

Specifications published here are current as of the date of publication of this document. OptiX2 reserves the right to change specifications without prior notice.

Here are some other key attributes of the maXtap™ Bypass Switch:
- Full link traffic bypass or traffic flow-based bypass
- Sub 50ms switchover on the traffic; sub 8ms optical port switching
- "Heartbeat" can be customized to trigger based on Layer 2 through Layer 4 and be specific to uplink (TCP) or the downlink (UDP) direction
- Load balancing between multiple security devices of the same type with auto-switch and recovery if a link fails

Product Specifications

The following table lists the technical specifications and parameters of OptiX[2]'s maXtap™ Bypass Switch:

OPTIX² maXtap™ Traffic Bypass Switch Specifications		
Model	OPTX-MXT-BYP-10G1	
Interface Types	Network Interface	Two LC duplex network adapters (multimode or single mode available) supports one duplex link (2x Tx/Rx).
	Appliance Interface	Two duplex SFP(+) slots for 1G SFP or 10G SFP+ (multimode or single mode available). LR/LX and SR/SX SFP/SFP+ modules supported.
Optical Parameters for Multimode Fiber	Multimode insertion loss	1.1dB to 1.6dB
	Multimode optical transmit power	-7.3dB to 1dB
	Multimode receive optical power	≥-12dB
	Multimode operating wavelength	850nm
	Multimode transmission distance	300m
Optical Parameters for Single Mode Fiber	Single mode insertion loss for LR / ER / ZR	1.1dB to 1.6dB for all types
	Single mode optical transmit power	-6dB to 0.5dB / -1dB to 3dB / 0dB to 4.0dB
	Single mode receive optical power	≥-14dB / ≥-18dB / ≥24dB
	Single mode operating wavelength	1310nm / 1550nm / 1550nm
	Single mode transmission distance	10km / 40km / 80km
Functional Performance	Total number of interfaces	4
	Line speed processing capacity	40Gbps

	Cross-link protection based on IP, Protocol, or 5-Tuple	Supported
	Dynamic load balancing	Supported
	Multi-channel load balancing	Supported
	Custom heartbeat message function	Supported
	Ethernet encapsulation support	Supported
	Bypass switching function	Supported
	Bypass switch without flash	Supported
	Console (RS232) management	Supported
	IP/Web network management	Supported
	SNMP V1/V2C network management	Supported
	Telnet/SSH network management	Supported
	SYSLOG protocol	Supported
	User authentication function	Supported
Power	Supply voltage	AC-220V (Standard) / DC-48V (optional)
	Frequency	50hz
	Input current	AC-3A / DC-10A
	Wattage	45W
Environment	Working temperature	0-50°C
	Storage temperature	-20-70°C
	Working humidity	10%-95%, No condensation
Device Management	Console port	RS232, 9600, 8, N, 1
	LAN port	1x10/100/1000Mbps Ethernet
	Password Authentication	Supported
Dimensions	Chassis	1U, 19 "x 1.75" x 13.75" (485mm x 44.5mm x 350mm)

Ordering Information

Use the following part numbers to order the 1/10Gbps maXtap™ Bypass Switch:

- OPTX-MXT-BYP-10G1 (1U chassis with 2 SFP/SFP+ slots and redundant AC power supplies)
- OPTX-SR-SFP-10G (multimode fiber 300m SFP)
- OPTX-SR-SFP-10G (single mode fiber 10km SFP)
- OPTX-ER-SFP-10G (single mode fiber 40km SFP)
- OPTX-ZR-SFP-10G (single mode fiber 80km SFP)