Multi-Homing Gateway
MHG - 3 5 0 0

Relying on a single WAN link is risky for any company due to the consequences of Internet disconnections. To avoid profit loss, the best tactic is to implement a fault tolerance mechanism for ensuring network continuity. Accordingly, Nusoft MHG-3500 comes equipped with link failover, load balancing and policy-based routing (PBR) to achieve fault tolerance. It also integrates with firewall, QoS manager, Web filter, AAA server (Authentication, Authorization, and Accounting), application blocker, anomaly traffic detection, full VPN connectivity (SSL / IPSec / PPTP VPN and trunking) and more, presenting you an all-in-one solution to simplify network management cost-effectively.

Product Features

Full IPv6 Compatibility

MHG-3500 is fully compatible with IPv6 addressing, the mainstream Internet protocol in the future. No additional budget is required for implementing another IPv6-based gateway simply for IPv4-to-IPv6 address translation.

Customizable & Scalable NIC Modules

Up to 10 to 26 GbE RJ45 ports (replaceable with mini-GBIC ports and expandable by using Virtual WAN feature) are available for defining as LAN, WAN, DMZ, or isolated NIC groups. Accordingly, MHG-3500 can physically segment a network, adding advanced controls (authentication, QoS, etc.) by serving as an internal firewall to improve management over networks.

Bi-directional Load Balancing & Policy-based Routing

With the multi-WAN module, outbound traffic are distributed across WAN links by load-balancing algorithms, due to which it delivers bandwidth aggregation and link failover capabilities, making the most of bandwidth, and yet connecting reliably. Besides, inbound traffic to your company website can be evenly load-balanced across each link to mitigate the load of Web requests, ensuring the accessibility to the website should any link failure occur.

Moreover, the network traffic generated from a specific service or user can be routed through a designated WAN link based on the company's network policies.

Total VPN Solution

Unlike conventional firewalls, MHG-3500's VPN Trunking feature delivers link failover and bandwidth aggregation capabilities to IPSec / PPTP tunnels, greatly increasing the speed and stability of VPN connections. In addition, hardware authentication is incorporated into SSL Web VPN connectivity, which allows user authentication to base on hardware information, such as CPU ID, hard disk serial number, etc. Branch offices and road warriors will be provided with VNC connectivity and Wake-on-LAN capability, as well as a fast and easy VPN access along with advanced controls (authentication, QoS, etc.).

Flexible Bandwidth Management

Global Quality of Service (QoS), individual QoS and P2P QoS are provided as tools to base bandwidth allocation on network policies, preventing the bandwidth being exhausted by minorities.

AAA Server

Authentication: Manages the Internet access by internal or external (RADIUS / POP3 / LDAP) authentication.

Authorization: Permits access to a specific resource or service.

Accounting: Provides detailed connection logs for network policy adjustment.

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Web Filtering

The Web Filtering feature employs a cloud-based URL database which is categorized into Anti-Social and Illegal, Pornographic and Abusive, Gaming and Gambling, Society and Commerce, Communication and Technology, Leisure, Information and Education, Other, and further categorized into sixty-four subcategories. Web access can be easily managed by category instead of a URL, keyword, etc.

Additionally, network administrators are allowed to restrict file transfers, MIME types and browser scripts, as well as provided with detailed logs and statistics for diagnosis.

Internet-based Application Blocking

The increasing popularity of instant messaging (Skype, WhatsApp, Line, ICQ, QQ, Yahoo, etc.), P2P file sharing (BitTorrent, eDonkey, Foxy, etc.), anonymous web browsing (Freegate, UltraSurf, etc.) has raised the risks of trade secret leak and security threats. Accordingly, MHG-3500 features Application Blocking to help manage the use of IM messengers (chats and file transfers) and avoid bandwidth being abused or misused by minorities. In addition, the use of multimedia streaming, Web-based email service, online gaming and remote controlling can also be effortlessly blocked by their packet signatures.

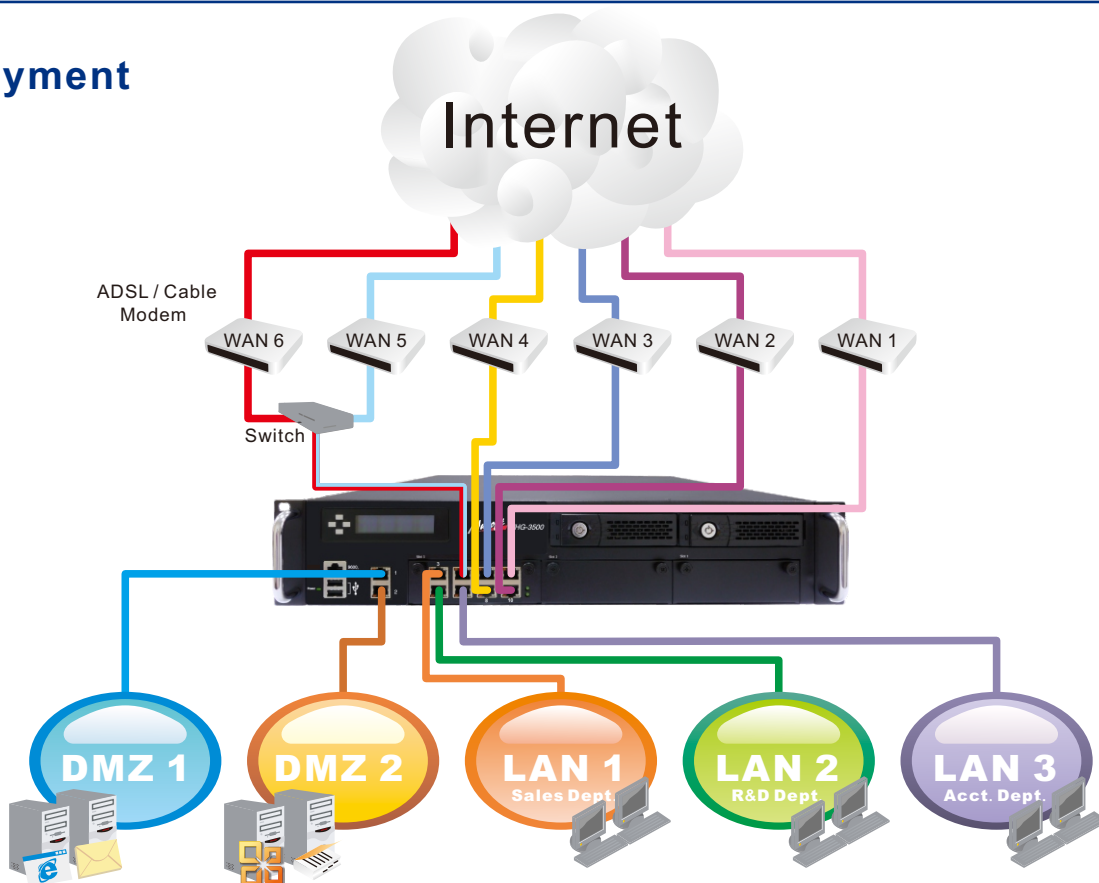## Anomaly Traffic Detection & Switch Co-Defense

MHG-3500 is capable of proactively blocking packet-flooding attacks and notifying related personnel of such an event. A core switch may be incorporated to perform a co-defense against DoS or DDoS attack by disabling the switch port containing the source of the attack.

One-Time Password Authentication

An unpredictable and unrepeatable password can be generated at each login using Nusoft OTP (available for iOS and Android devices), offering users a more secure identity verification along with their account credentials.

Deployment

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Product Highlights

Highlight	Benefit	Third-Party Product
Full IPv6 compatibility	Saves the budget for an IPv6-based gateway simply for IPv4-to-IPv6 address translation.	Either fully or partially (Web filtering, application blocking, policy-based routing, etc.) incompatible with IPv6 addressing.
Customizable & scalable NIC modules	Enables you to define, group, or increase NIC ports, as well as allows you to create multiple virtual WAN links over a physical WAN link for the needs of a large network.	Either fixed to factory default or incapable of multi-WAN load balancing.
Unified network management	Provides an effortless network management through a unified user interface.	Merely a firewall equipped with simple security mechanisms and cluttered management interfaces; operation requires a separate configuration for each feature.
LAN security mechanisms	Secures LAN networks with anomaly flow detection and switch co-defense capabilities, as well as serves as internal firewall.	No protection against attacks initiated from within the network.
Flexible bandwidth management	Adds flexibility to bandwidth management by providing global QoS, individual QoS and P2P QoS.	Lacks flexibility in bandwidth management due to the only option being maximum bandwidth.
Total VPN solution	Securely tunnels network connections using PPTP/IPSec/SSL VPN along with trunking capability and policy-based management.	Merely offers PPTP / IPSec VPN connectivity and has no advanced security and manageability.
Various authentication mechanisms	Greatly increases the network security by using hardware information (CPU ID, hard disk serial number, etc.) and one-time password for user authentication.	Network security is at risk due to sole reliance on user credentials for authentication.
Policy-based routing	Allows in- / outbound traffic to be routed based on network polices.	Only comes in outbound routing capability and has no manageability.
Internet-based application blocking	Restrains the use of Internet-based applications such as IM clients, P2P software, etc.	Less effective in blocking the use of Internet-based applications by port number.
Web category filtering	Effortlessly regulates website access by eight categories and sixty-four subcategories.	Less effective in filtering website access due to simple criteria such as IP, domain, keyword, etc.
Bi-directional load balancing	Ensures stable connectivity to the Internet (outbound traffic) and reliable access to your business website (inbound traffic).	Fails to meet the needs of company websites for inbound load balancing.
Session persistence capability (for online banking & gaming)	Avoids online banking or gaming service interruption by maintaining the same IP throughout a session.	No solution available for online banking or gaming service interruption due to IP inconsistency.

IPv6 IPv4
IPv6 Compatibility

LAN 2
Custom NIC Ports

SPI Firewall

VPN
Total VPN Solution

Internet
Multi-WAN Load Balancing

Link Failover

Policy-based Management

User Authentication

OTP Authentication

Web UI Management

PBR

18
Web Filtering

Up- / Download Blocking

AAA
AAA Server

Application Blocking

60
QoS

DoS
Anomaly Traffic Detection

Switch Co-Defense

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MHG Series Product Comparison

Model		MHG-800	MHG-1000	MHG-1500	MHG-2500	MHG-3500
Specifications						
Networking	No. of NIC Ports	4 GbE	4 GbE	6 GbE	10~18 GbE	10~26 GbE
	Connector Type	RJ45	RJ45	RJ45	RJ45 / mini GBIC	RJ45 / mini GBIC
	Custom NIC Ports	○	○	○	○	○
0dBA Fanless Design		○	✕	✕	✕	✕
Power Redundancy		✕	✕	✕	✕	○
Form Factor		9" Desktop	1U Rackmount	1U Rackmount	1U Rackmount	2U Rackmount
Features						
IPv6 Compatibility		○	○	○	○	○
NIC Teaming		○	○	○	○	○
Virtual WAN		✕	✕	✕	○	○
SPI / Internal Firewall		○	○	○	○	○
Web Filtering Database [Optional]		○	○	○	○	○
Load Balancing	Outbound	○	○	○	○	○
	Inbound	○	○	○	○	○
Policy-based Routing		○	○	○	○	○
AAA Server	Authentication	○	○	○	○	○
	Authorization	○	○	○	○	○
	Accounting	○	○	○	○	○
Global QoS		○	○	○	○	○
Individual QoS		○	○	○	○	○
P2P QoS		○	○	○	○	○
Up- / Download Blocking		○	○	○	○	○
Application Blocking		○	○	○	○	○
VPN Connectivity	IPSec / PPTP VPN	○	○	○	○	○
	VPN Trunking	○	○	○	○	○
	SSL Web VPN	○	○	○	○	○
	SSL Application	✕	✕	○	○	○
	Hardware Authentication	○	○	○	○	○
VLAN / VLAN Trunking		○	○	○	○	○
High Availability		✕	✕	○	○	○
OTP Authentication		○	○	○	○	○
Performance						
CPU Cores / Threads		1 / 1	1 / 1	2 / 2	2 / 4	4 / 8
Firewall Throughput		470 Mbps	810 Mbps	1.1 Gbps	2.5 Gbps	2.9 Gbps
Max. Concurrent Sessions		1,000,000	1,000,000	1,000,000	2,000,000	4,000,000

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