

DPtech Anti-DDoS Series



Overview

DoS (Denial of Service) leverage various service requests to exhaust victims' system resources, causing the victim to deny service to its customers. DDoS (Distributed Denial of Service) grows rapidly with the rise of botnet, featuring with simple attack methods, great influence and difficulties in trace. Botnet consists of thousands of hijacked computers and provides bandwidth and hosts for DDoS attacks, it will forms a large attack scale and a significant amount of network flows, causing great harm to victims.

With the continuous improvement and development of DDoS attack technology, service providers like ISP, ICP, IDC and etc face increasing security and operation challenges. In order to ensure normal network and service operation, service providers must inspect and clean flows before DDoS attacks influence key services and applications. Meanwhile, service providers can make probe and cleaning of DDoS attack flows as a kind of value-added service and get better user satisfaction.

Traditional DDoS defense methods use devices based on network layer inspection like firewall, router and etc. But most DDoS attacks adopt with standard protocols during attack, traditional defense methods cannot correctly identify and protect. Meanwhile, firewall and router are not designed for DDoS attack defense. Therefore, it will suffer significant performance degradation and cannot work properly once this feature enables.

To solve these technical problems, DPtech releases professional Anti-DDoS Series products against DDoS attacks, which include anomalous flows inspection(Probe), anomalous flows cleaning (Guard) and anomalous flows cleaning service management platform.

DPtech Anti-DDoS Series products use industry-leading technologies like "Parallel Flows Filtering" technology, "Intelligent Flows Probe" technology and able to find all kinds of DDoS threats in the network timely. It allow us to implement fast filtering of attack flows, thus to protect WAN, IDC, etc against massive DDoS attacks effectively. A single-machine processing capability can reach 12Gbps.

Series

The following are the DPtech Anti-DDoS series product's portfolio.



Guard3000-Blade-EI



Guard3000-Blade-NI



Guard3000-Blade-A



Guard3000-TS



Guard3000-GE



Guard3000-GA



Probe3000-Blade-AI



Probe3000-TS



Probe3000-GE

Features

Efficient Flows Probe and Cleaning Technology

- DPtech Anti-DDoS Series not only supports Deep Packet Inspection (DPI), but also analyzes NetFlow / NetStream / SFlow information (DFI) outputted by network devices, thus to deeply identify attack packets hidden in background flows and implement accurate flows identification and cleaning.
- It adopts advanced distributed multi-core hardware structure and implements multi-device cluster, thus to create over 10 Gigabit anomalous flows cleaning platform.

High Availability

- DPtech Anti-DDoS Series adopts inline or one-arm deployment to defend against DDoS attacks. When adopting one-arm deployment, it implements cleaning on required flows without influences on normal flows in any case.
- In order to satisfy various networking applications, good adaptability of network protocols supports network layer protocols like ARP, VLAN, Link aggregation, etc. and routing protocols like static route, RIP, OSPF, BGP, policy routing, etc.
- It supports real-time cleaning on threat flows under online deployment.

Multi-layer Security Protection

- Through static vulnerability attack signature inspection, dynamic rules filtering, anomalous flows rate-limiting and advanced "Intelligent Flows Inspection" technology, DPtech Anti-DDoS Series implements multi-layer security protection, inspects and blocks various DoS/DDoS attacks and unknown malicious flows at network layer and application layer accurately, such as SYN Flood, UDP Flood, ICMP Flood, DNS Query Flood, HTTP Get Flood, CC attack and etc.

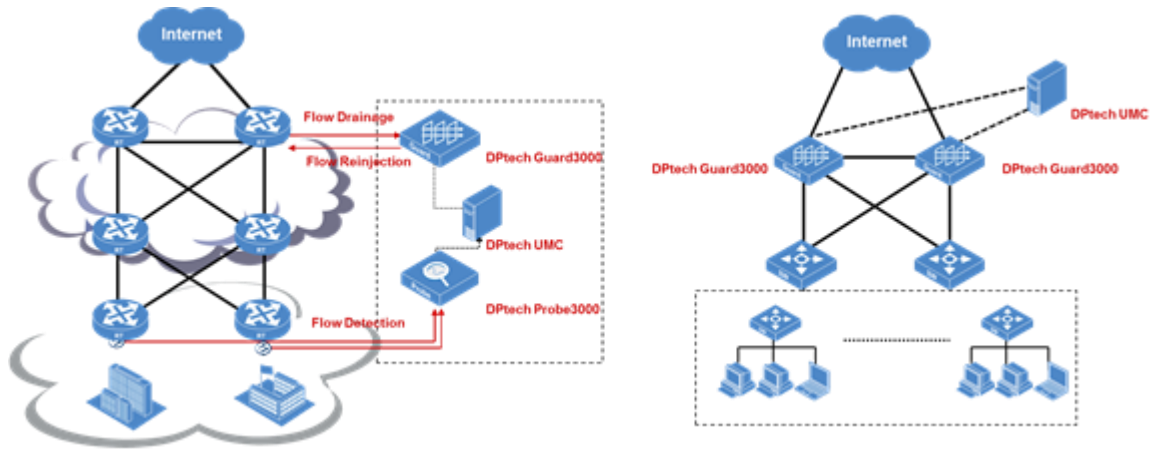
Automatic Flows Redirection and Flexible Flows Reinjection

- When finding DDoS attacks, anomalous flows cleaning device issues BGP updating route advertisement to neighbor's router or switch, redirect victim's flows to DPtech anomalous flows product and cleans them automatically and rapidly. Meanwhile, anomalous flows cleaning product returns clean flows back to users through various methods, such as policy routing, MPLS VPN, GRE VPN, Layer2 pass-through, etc without influences user's normal service flows.

Detailed Analysis on Statistical Report

- For various flows after inspection and cleaning, DPtech Anti-DDoS Series provides rich attack logs and report statistics features for users to understand network flows state, such as flows information before attack, flows information after cleaning, attack flows scale, time and order, etc., and all kinds of detailed report information like attack trend analysis, etc.

Typical Model



One-arm Deployment: High reliability, inspection and cleaning can be deployed centrally and separately at core layer or convergence layer of service providers' MAN, or data center egresses.

Inline Deployment: Simple deployment without Anomalous Flows Inspection device (Probe) .

Specification

Table 1 Lists the Hardware Features and Performance of DPtech Probe3000 series

Item	Probe3000-GE	Probe3000-TS	Probe3000-Blade-AI
Interface	1xConsole,8Combo , 16xGE SFP	1xConsole, 8xGE SFP, 8xGE	1xConsole, 12xGE, 12xGE SFP,2x10GE SFP+
Slot	2	2	-
CF Card	2GB	2GB	2GB
DDR SDRAM	8GB	16GB	16GB

Item	Probe3000-GE	Probe3000-TS	Probe3000-Blade-AI
Dimensions (W x D x H)	436x470x44 mm	436x470x88.8 mm	Blade Type
Power Supply	2	2	-
Rated Voltage Max Current	100-240VAC; 1.8A	100-240VAC; 1.8A	-
Max Power Consumption	300 W	300 W	150w
MTBF	36 years	36 years	36 years
Operating Temperature	0°C to 45°C (32 to 113°F)	0°C to 45°C (32 to 113°F)	0°C to 45°C (32 to 113°F)
Relative Humidity	10% to 95%	10% to 95%	10% to 95%
Weight	8 kg	10 kg	-
Throughput	2Gbps	5Gbps	5Gbps
Concurrent Connections	1,500,000	2,000,000	2,000,000
New Connections per Second	150,000	180,000	180,000

Table 2 Lists the Hardware Features and Performance of DPtech Guard3000 series

Item	Guard3000-GA	Guard3000-GE	Guard3000-TS
Interface	1xConsole, 4xGE SFP, 4xGE	1xConsole, 8Combo, 16xGE SFP	1xConsole, 4x10GE SFP+, 4xGE Combo
Slot	2 slot	2 slot	4 slot
CF Card	1GB	2GB	2GB
DDR SDRAM	2GB	8GB	16GB
Dimensions (W x D x H)	430x261x44 mm	436x360x44 mm	436x510x88 mm
Power Supply	2	2	2
Rated Voltage Max Current	100-240VAC; 1.5A	100-240VAC; 1.8A	100-240VAC; 1.8A
Max Power Consumption	150 W	150 W	300 W
MTBF	36 years	36 years	36 years
Operating Temperature	0°C to 45°C (32 to 113°F)	0°C to 45°C (32 to 113°F)	0°C to 45°C (32 to 113°F)
Relative Humidity	10% to 95%	10% to 95%	10% to 95%
Weight	3.1 kg	8 kg	10 kg
Throughput	3Gbps	6Gbps	10Gbps

Item	Guard3000-GA	Guard3000-GE	Guard3000-TS
Concurrent Connections	3,000,000	3,000,000	8,000,000
New Connections per Second	40,000	150,000	300,000

Item	Guard3000-Blade-A	Guard3000-Blade-NI	Guard3000-Blade-EI
Interface	1xConsole, 12GE, 12xGE SFP, 2x10GE SFP+	1xConsole, 12xGE SFP, 4x10GE SFP+	1xConsole, 12xGE Combo, 4x10GE SFP+
Slot	-	-	-
CF Card	2GB	2GB	2GB
DDR SDRAM	8GB	8GB	8GB
Dimensions (W x D x H)	Blade Type	Blade Type	Blade Type
Power Supply	-	-	-
Rated Voltage Max Current	-	-	-
Max Power Consumption	-	-	-
MTBF	36 years	36 years	36 years
Operating Temperature	-	-	-
Relative Humidity	-	-	-
Weight	-	-	-
Throughput	10Gbps	20Gbps	40Gbps
Concurrent Connections	8,000,000	20,000,000	25,000,000
New Connections per Second	300,000	500,000	600,000

Table 3 Lists the Feature of DPtech Anti-DDoS series

Item	Description
Deployment	<ul style="list-style-type: none"> One-arm deployment and inline deployment
Attacks	<ul style="list-style-type: none"> CC attack, DNS Query Flood, SYN Flood, UDP Flood, ICMP Flood, HTTP Get Flood, Land, Smurf, Fraggle, WinNuke, Ping of Death, Tear Drop, TCP flag anomaly, address scanning, port scanning and etc
Inspection	<ul style="list-style-type: none"> NetFlow/ NetStream/ SFlow protocol based deep flows inspection method (DFI)

Item	Description
	<ul style="list-style-type: none"> Deep Packet Inspection (DPI)
Redirection	<ul style="list-style-type: none"> BGP redirection
Clean Flows Reinjection	<ul style="list-style-type: none"> Policy routing, MPLS VPN, GRE VPN, two layers pass-through and etc
Management	<ul style="list-style-type: none"> Web GUI, SSH and serial port console Centralized management platform

Ordering Information

Hardware List

Model	Model Description	Remarks
Probe3000-GE	DPtech Probe3000-GE Double AC Power Host	Required
Probe3000-TS	DPtech Probe3000-TS Double AC Power Host	Required
Probe3000-Blade-A	DPtech Probe3000-Blade-A Service Module	Required
Guard3000-GA	DPtech Guard3000-GA Double AC Power Host	Required
Guard3000-GE	DPtech Guard3000-GE Double AC Power Host	Required
Guard3000-TS	DPtech Guard3000-TS Double AC Power Host	Required
Guard3000-Blade-A	DPtech Guard3000-Blade-A Service Module	Required
Guard3000-Blade-NI	DPtech Guard3000-Blade-NI Service Module	Required
Guard3000-Blade-EI	DPtech Guard3000-Blade-EI Service Module	Required

Unified Management Center

Model	Model Description	Remarks
SW-UMC-PLAT	UMC Management Platform Software	Required
LIS-UMC-GuardM	DPtech UMC Guard Manager License	Required

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