

Stingray AntiDDoS

- Detection
- Mitigation
- Analysis

About VAS Experts

VAS Experts is a telecom software developer. Since 2013, we have completed **over 2000 installations** worldwide.

Our team has **over 25 years work experience** in telecommunication software development and wide knowledge in technologies.

20M+

users

More than

35 Tbps

Latest Installations:

- Middle East
- CIS
- South America
- Europe
- Africa
- Asia-Pacific



Our products

Stingray Service Gateway (SSG) — multifunctional platform for traffic management

For Internet service providers:



DPI

QoS-based traffic management,
filtering by black and white lists



BNG/BRAS

Scalable and Cost-Effective
Software Gateway



AntiDDoS

Protecting the operator's network
from cyberattacks



QoE analytics

Traffic Monitoring and Analysis
System



CG-NAT

Providing transparent network
address and protocol translation



VEOS

Operating system

Our products

Stingray Service Gateway (SSG) — multifunctional platform for traffic management

For mobile operators:



PGW

An intelligent gateway that provides traffic control within the EPC architecture



PCEF

Flexible pricing based on various conditions in accordance with PCRF requirements



EPDGC

Solution for launching Wi-Fi Calling (VoWiFi)

Own DPI Engine

History

2013 — DPI

2016 — CG-NAT

2017 — L3 BNG DualStack IPv4/IPv6

2018 — Lawful Interception

2019 — L2 BNG DualStack IPv4/IPv6

2020 — Mobile Networks Support, LBS

2021 — Border Router

2022 — VAS Cloud Services

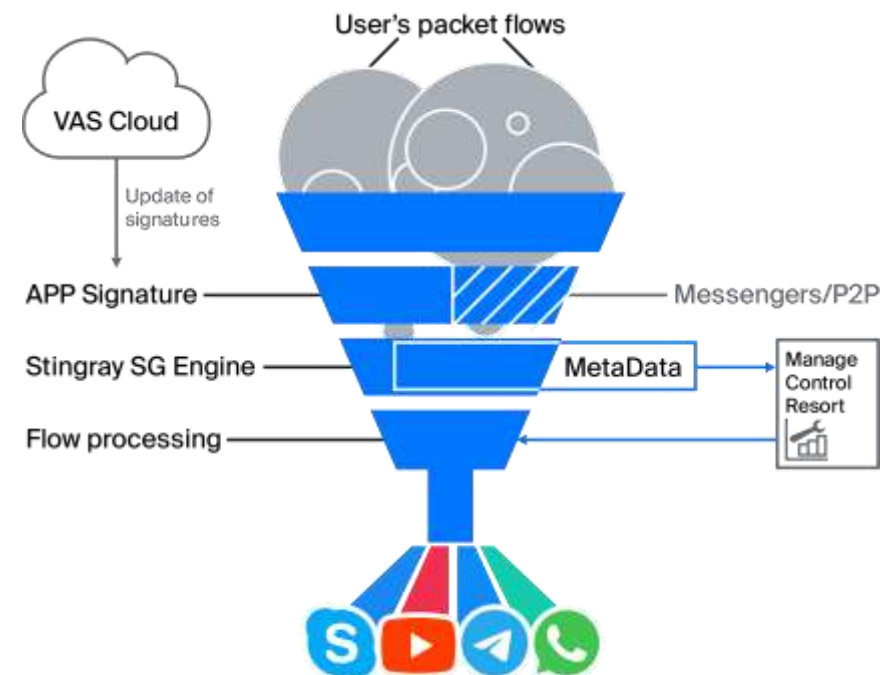
2023 — VEOS, On-Stick, EPDG

2024 — PCEF, Diameter

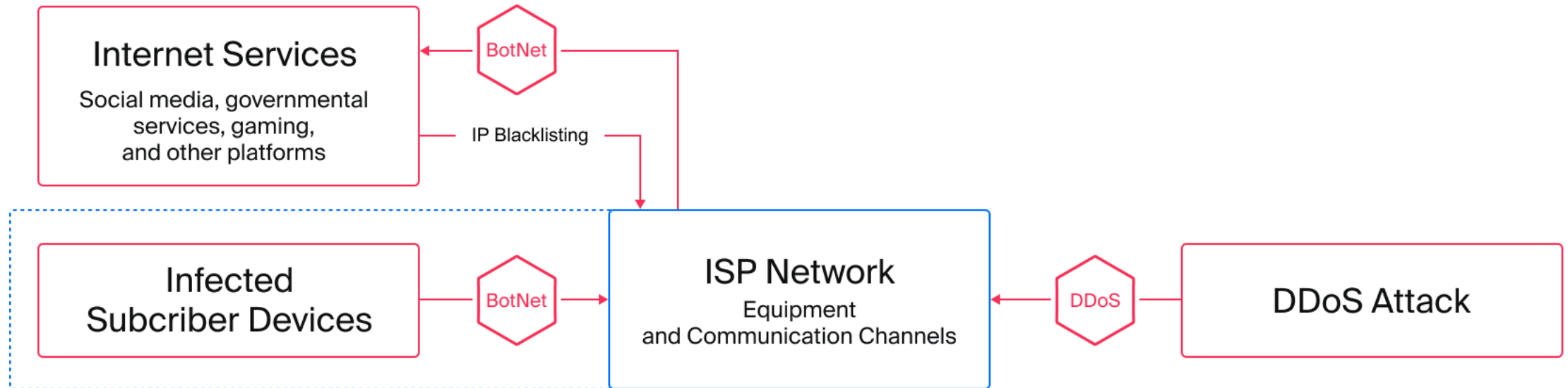
2025 — PGW, AntiDDoS

Stingray SG can compete with:

Sandvine	Cisco SCE	Cisco ASR	MikroTik	Ericsson SE
Allot	A10 Network	Juniper MX	Huawei NE	Nokia SR



DDoS and BotNet Challenges for ISPs



BotNet Infection

- Increased load on equipment
- Adding public IP addresses to blacklists, causing service unavailability for subscribers

Uplink channel overload

- Inability to provide services
- Subscriber complaints and churn
- Financial and reputational losses

DDoS Attack Statistics

2025 – a record year in the volume and power of DDoS attacks

47.1 million DDoS attacks in 2025 (twice as many as in 2024). Recorded power record – **31.4 Tbps**; in the first quarter – more than 700 hyper-volumetric attacks exceeding 1 Tbps ([Cloudflare](#))

Telecommunications – a constant target of attackers

The financial and telecommunications sectors account for **60% of all targets worldwide** ([StormWall](#))

BotNet Growth

Unprecedented Aisuru botnet compromised **1-4 million devices**, launching attacks peaking at **29.7 Tbps** ([Cloudflare](#))

The Problem with Traditional Solutions

Traditional protection focuses on services and websites

- Protects end-user services and websites
- Ensures security of customer-facing applications
- Monitors subscriber traffic patterns

Stingray AntiDDoS is designed to protect Internet Service Providers

- Inbound channel protection — mitigating attacks before they overload network bandwidth
- Detailed traffic analysis via IPFIX fullflow is provided by DPI mechanisms
- ML-based detector builds a healthy traffic baseline and detects anomalies

Stingray AntiDDoS Solution

Protection against common forms of attacks on telecom operators

- ✓ Distributed architecture providing high fault tolerance
- ✓ Adaptive protection and automatic rule updates
- ✓ Neural network algorithms and DPI provide deep traffic analytics
- ✓ The solution is flexibly configurable and supports various blocking scenarios

Stingray AntiDDoS Solution

Protection against common forms of attacks on telecom operators

Inbound channel flooding

- ✓ Amplification attacks (DNS, NTP, UDP flood and others)
Protection: blackhole of attacked addresses or applying FlowSpec on the uplink channel. Other protection methods are ineffective
- ✓ BotNet attacks
Protection: blackhole of attacked addresses, FlowSpec on uplink channel, creating a BotNet address list and blocking them on Stingray

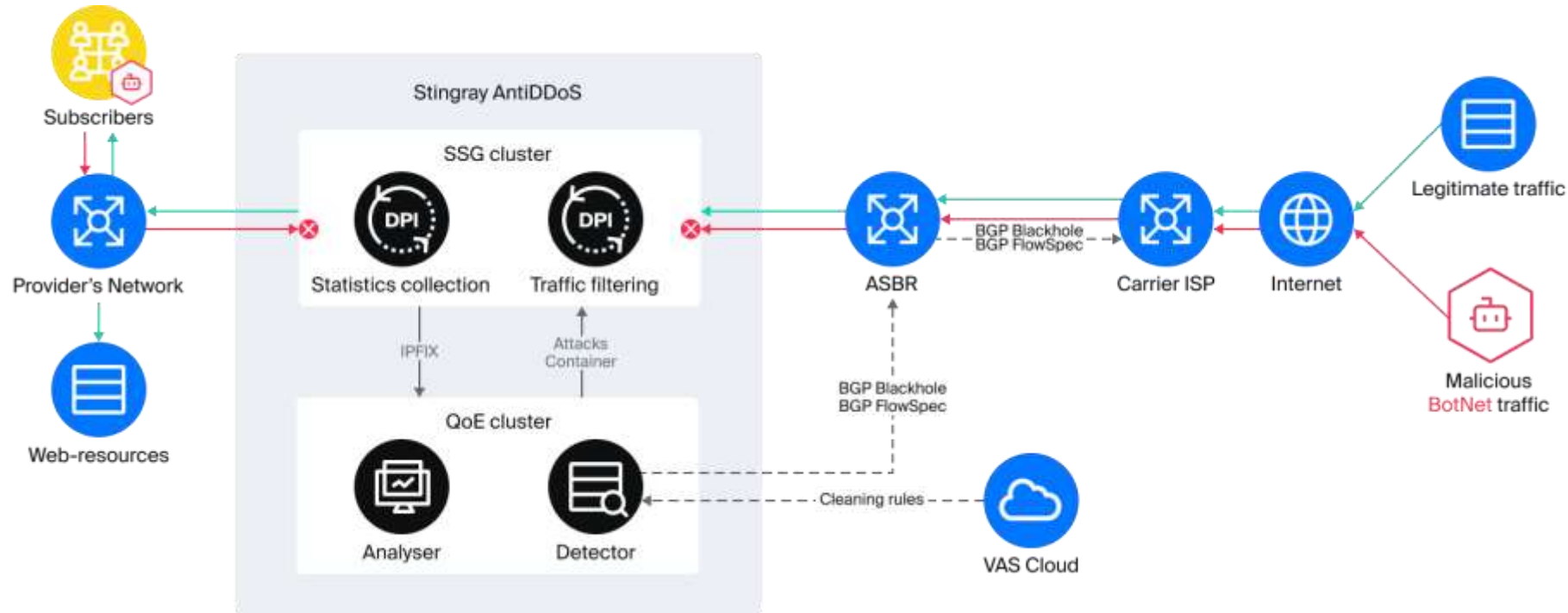
High PPS Attack

- ✓ Flood, SYN flood, typically with source IP spoofing
Protection: redirecting traffic to Stingray for filtering or blackholing attacked addresses

Compromise of operator network elements

- ✓ Risk is determined by scanning the operator's address space
Protection: detecting such sessions and blocking them by external address

Stingray AntiDDoS Solution



Analysis

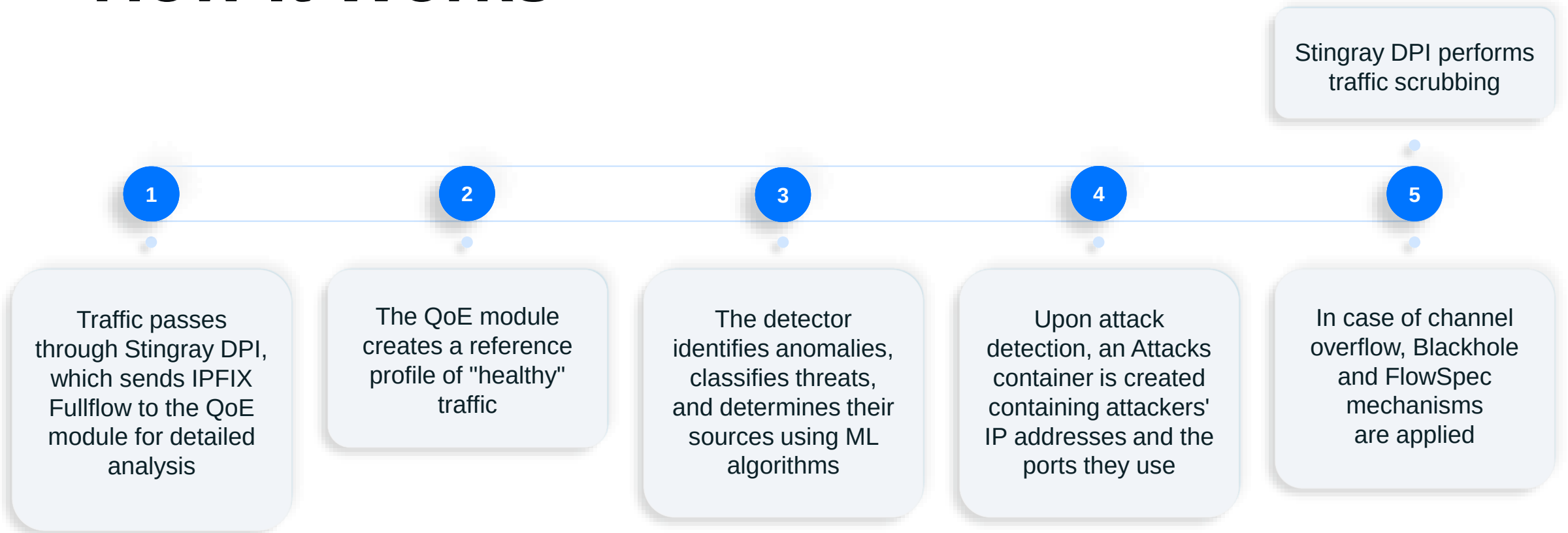
Detection

Scrubbing

Blackhole

FlowSpec

How It Works



Top DDoS attacks

Period

02/16/2026 14:40 - 02/17/2026 14:40

For all DPI devices

10 minutes

Top attacks (DDoS attacks)

Target IP address	Number of attacks	Number of attack	Sessions	Average duration	Traffic speed	flow speed
FILTER						
10.25.7.247	1	1	2451437	27.3 s	1.9 Mbit/s	615 Pkts/s
10.9.98.57	1	1	2406313	22.8 s	1.8 Mbit/s	464 Pkts/s
10.29.239.214	1	1	1884689	20.3 s	825.2 Kbit/s	183 Pkts/s
10.25.16.48	1	1	1353470	17.4 s	2.4 Mbit/s	289 Pkts/s
10.253.25.211	1	1	1289163	14.4 s	6.2 Mbit/s	690 Pkts/s
10.29.79.35	1	1	1144520	22.4 s	975.7 Kbit/s	291 Pkts/s
10.248.70.208	1	1	977797	9 s	877 Kbit/s	117 Pkts/s
10.29.234.6	1	1	832428	17.3 s	484.4 Kbit/s	52 Pkts/s
10.138.5.221	1	1	772650	12 s	2.8 Mbit/s	298 Pkts/s
10.25.244.181	1	1	754541	12.2 s	1.4 Mbit/s	176 Pkts/s
10.18.161.0	1	1	712866	11.9 s	1.1 Mbit/s	120 Pkts/s
10.24.233.6	1	1	701596	6.4 s	1.6 Mbit/s	525 Pkts/s
10.20.61.124	1	1	692647	9.9 s	385.3 Kbit/s	48 Pkts/s
10.317.239	1	1	661379	17.7 s	1.7 Mbit/s	273 Pkts/s

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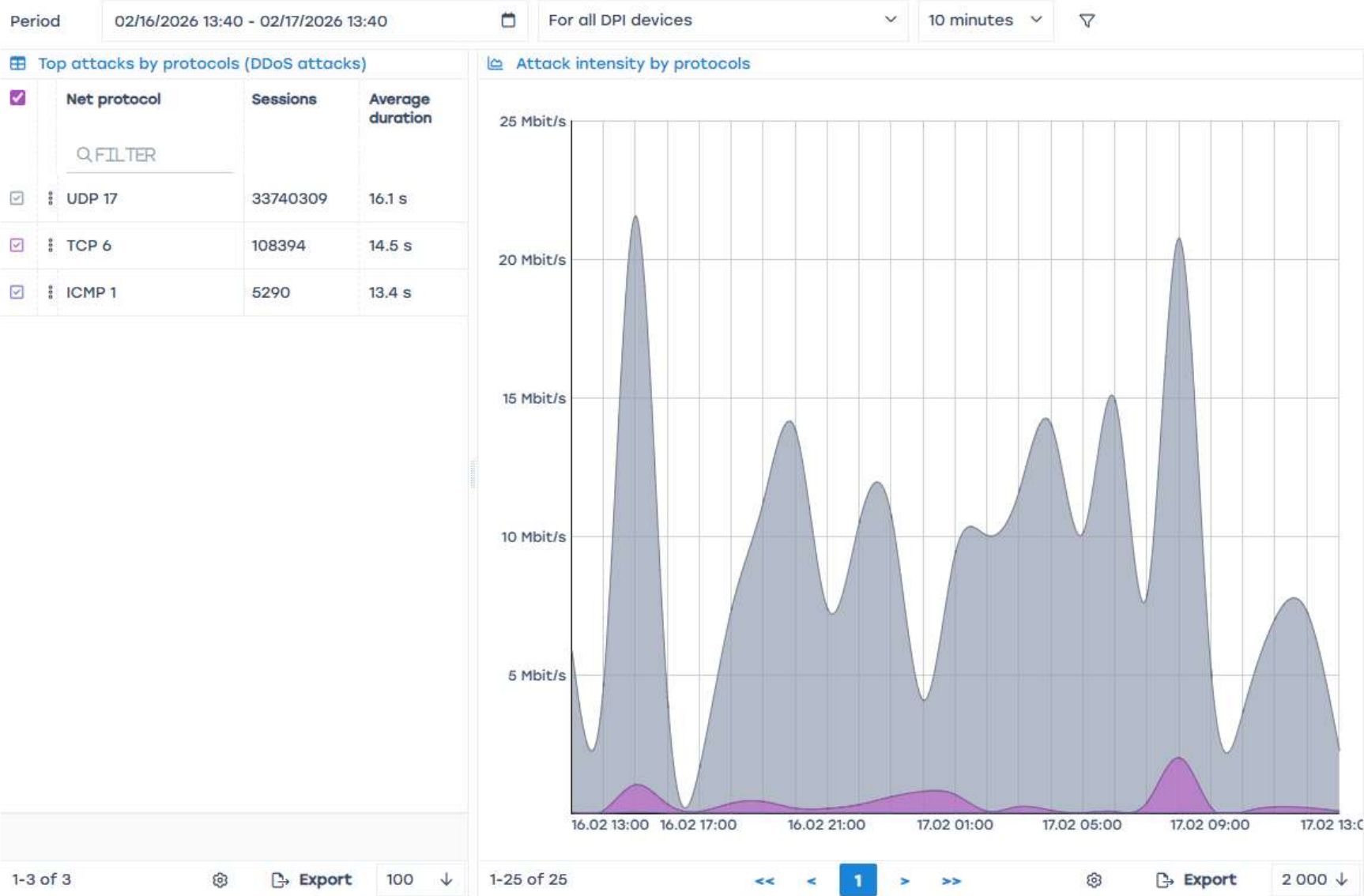
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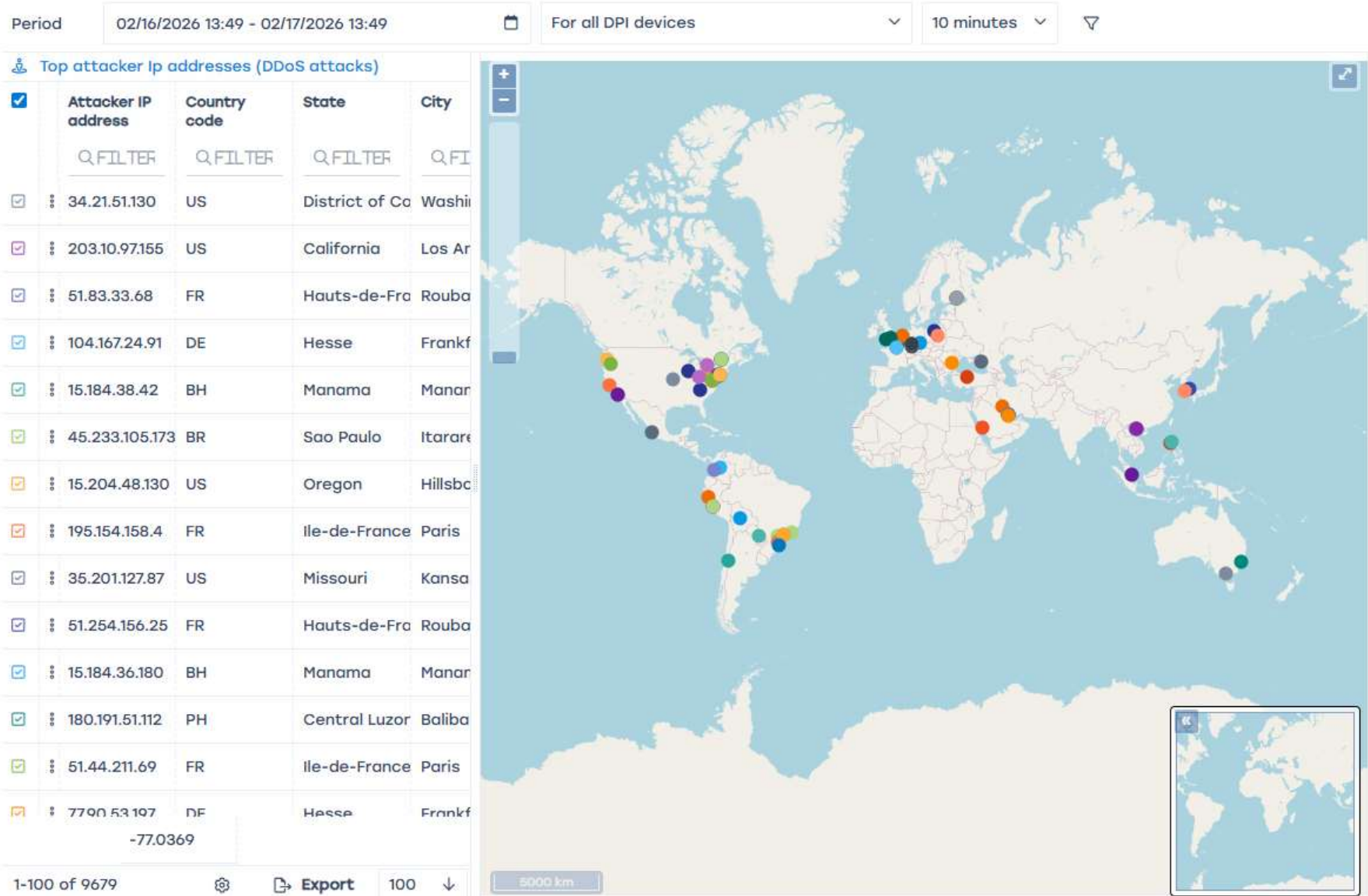
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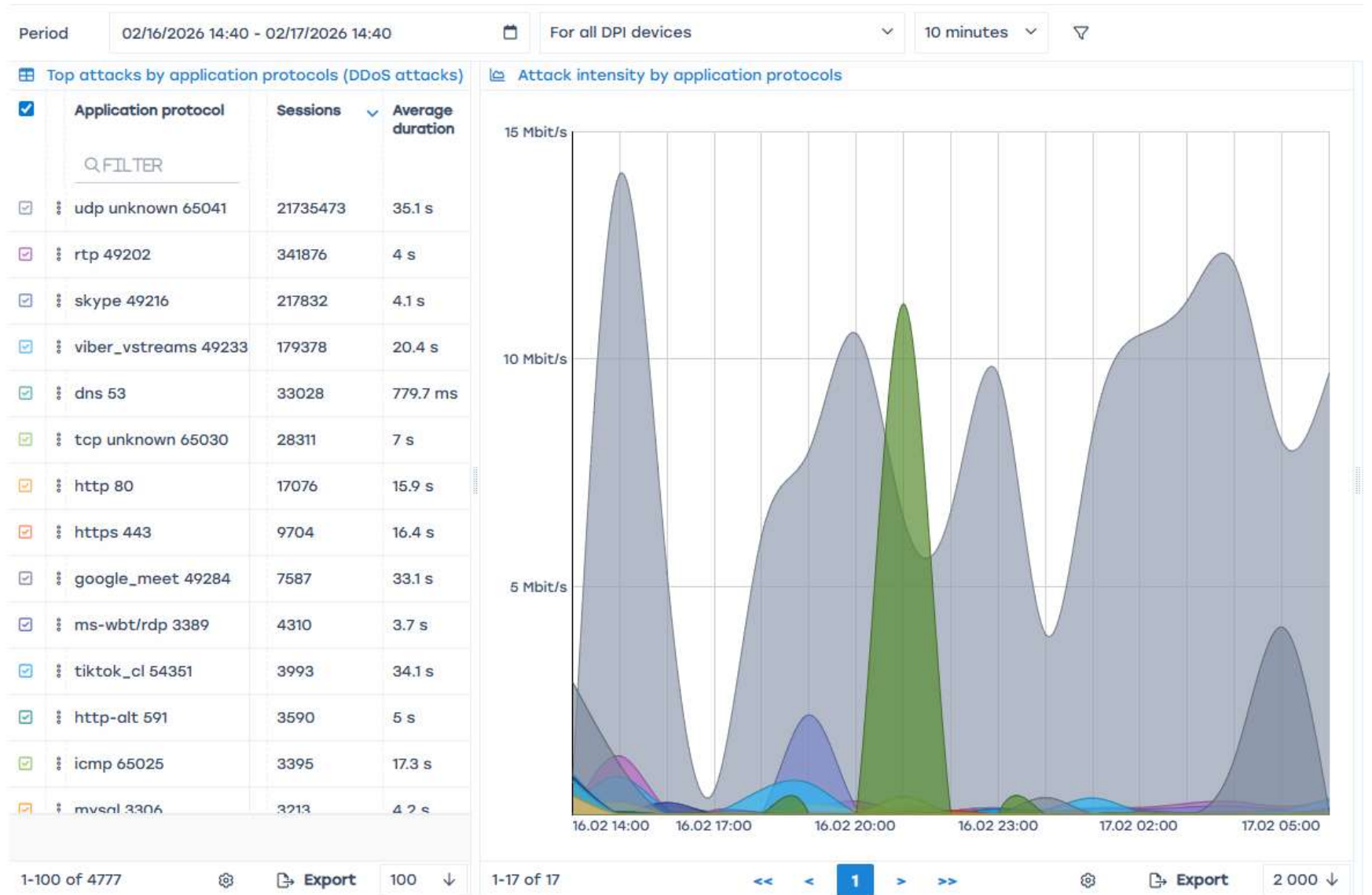
Top attacks
by protocols



Top attacker IP addresses



Top attacks by application protocols



Solution Features

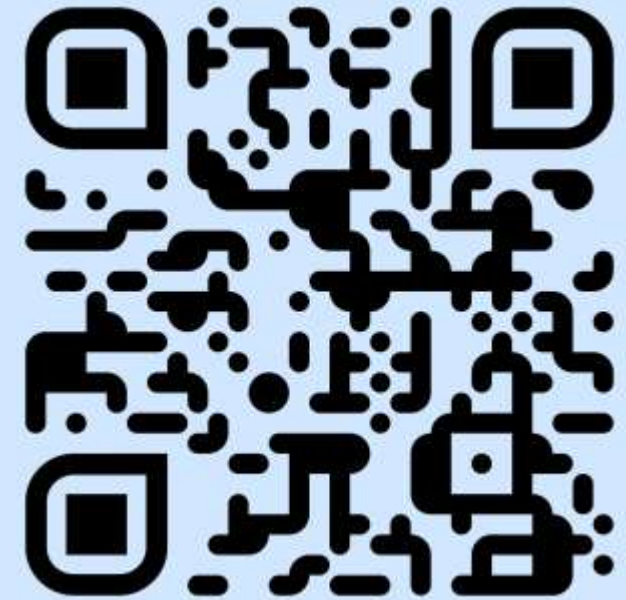
- ✓ Response time under 1 minute
- ✓ Processing up to 600 million packets per second
- ✓ Filtering capacity up to 5 Tbps
- ✓ Protection against 100+ simultaneous attacks

Requirements and Getting Started

Stingray AntiDDoS requires:

- ✓ Latest version of QoE and GUI
- ✓ QoE AntiDDoS license is purchased as a separate option
- ✓ Stingray BASE / COMPLETE / BNG license with mark and channels options
- ✓ QoE is installed on a dedicated server or virtual machine

Request your personalized solution demo and testing



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