



**APPOSITE**  
TECHNOLOGIES

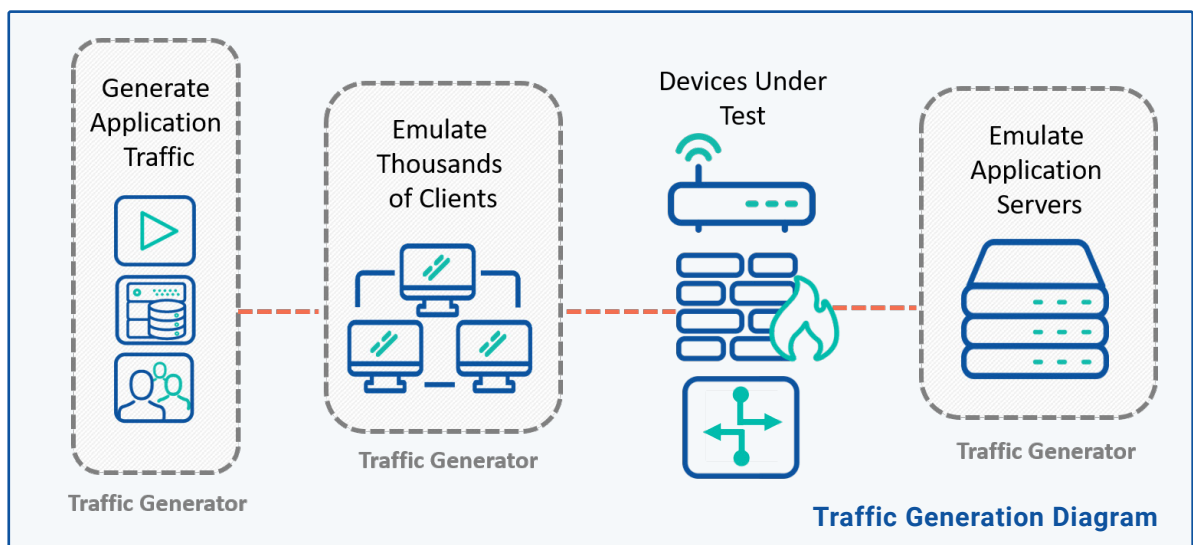
# Netropy Traffic Generation Solutions

Traffic Generation Re-Imagined



Apposite's modern suite of traffic generation solutions delivers sophisticated performance testing for a variety of network, application, and security test scenarios. Optimize device and network performance by replicating realistic application traffic and protocols at tremendous scale.

With Netropy Traffic Generation Solutions you can identify performance bottlenecks and failure points in the lab, before you go live, to ensure quality of service for your products and quality of experience for your customers.



## SOLUTIONS OVERVIEW



### AppStorm

**Optimize the performance and functionality of application-aware devices and systems**

AppStorm helps you validate the performance of application-aware devices like firewalls and SD-WAN gateways at scale using an extensive library of pre-defined application flows. By emulating clients, servers and real network traffic with a variety of application mixes and protocols, you can ensure quality of service for products and quality of experience for customers.

- Use to performance benchmark application aware devices and systems: SD-WAN gateways, NextGen Firewalls, IPS/IDS Systems, DPI, Anti-DDoS readiness
- Includes a large and constantly growing library of pre-built application flows for Video Streaming, Social Media, SaaS, E-Commerce, Finance, Gaming, Chat, Web Conference, and many others
- Supports hundreds of individual application flows for many applications such as, Netflix, Oracle, SAP, Facebook Twitter, Uber, Zoom
- Emulates millions of end points with unique MAC and IP addresses
- Measures the impact of QoS policies on application performance and end-user experience



### AppPlayback

**Capture, reproduce, and amplify production traffic in a controlled lab environment**

AppPlayback captures production network conditions and converts them into dynamic traffic streams to help find and eliminate performance bottlenecks on your network before they reach your end user.

Record and replay real-world traffic and application characteristics in the lab at tremendous scale by amplifying a single traffic capture into up to a million flows. Emulate clients and servers to quickly and easily validate the performance of network devices.

- Identify and pin-point packets causing performance errors or device crashes
- Isolate and capture any application flow for replay at scale
- Amplify single flows into millions of flows for load testing
- Load and replay up to 30,000 PCAPs
- Replay large PCAP (> 5 GB)



## TrafficEngine

**Benchmark the raw packet level performance of networks and devices with classical performance measurements**

Quickly and easily assess complex network topologies with TrafficEngine by generating line rate stateless traffic and emulating millions of complex traffic flows. Ensure network performance, QoS policies, and resiliency at scale by stress testing under the most challenging scenarios.

- Easily benchmark device performance for throughput, packet loss, min, max, and avg latency, jitter and much more
- Supports over 130 pre-defined and customizable layer 2-7 header templates including IPv4, IPv6, TCP, UDP, HTTP, SIP, RTP, and many more
- Multi-gig Ethernet support – 1, 2.5, 5, 10, 25, 40, and 100 GigE
- Offline Analyzer to visualize long duration tests graphically
- Ability to save per port and per stream statistics as CSV
- Automate testing with RESTful API



## SessionStrike

**Evaluate the session holding capabilities of stateful network devices and servers**

SessionStrike assesses how fast a stateful network device can establish TCP and HTTP connections for comprehensive capacity and performance testing. By emulating clients and application servers at a very high scale, SessionStrike can create millions of TCP and HTTP connections to verify the session holding capabilities of devices.

- Test application servers, load balances, firewalls, and other stateful devices
- Measure HTTP transfer rate
- Run concurrent TCP connection capacity tests
- Test HTTP capacity with HTTP persistent connections



## DNS Storm

**Measure the Performance and Capacity of Carrier-Grade DNS Servers Against a High Scale of DNS Queries**

Use DNS Storm to find the breaking point of carrier-grade DNS servers by generating up to 2 million DNS queries per second from up to a million emulated clients. With an up-to-date catalog of the world's most used domains, DNS Storm can evaluate the server's real-world response to both valid and invalid queries.

- Find the maximum number of queries per second a server can handle
- Configure tests with valid and invalid queries to assess how the device will respond
- Induce cache misses and stress the DNS server to find the breaking point
- Capture statistics such as queries sent, queries lost, avg. packet size, max latency etc.
- Supports both IPv4 and IPv6 emulated clients
- Supports dozens of query types
- WebCrawler that auto populates a list of 500 thousand of the current most popular domains

## HARDWARE SPECIFICATIONS

Specifications	N61	10G2	10G4	100G2
<b>Capacity</b>				
<b>Ethernet Ports</b>	2 x SFP+ 1 Gbps or 2 x RJ45 1 Gbps	4 x SFP+ 1 Gbps/10 Gbps	8 x SFP+ 1 Gbps/10 Gbps	4 x QSFP 25/40/50/100 Gbps
<b>Max. Agg. Throughput</b>	2 Gbps	40 Gbps	80 Gbps	400 Gbps
<b>Maximum Hosts</b>	2 Million	4 Million	8 Million	8 Million
<b>Maximum Frame Size</b>	9 KB	9 KB	9 KB	9 KB
<b>Interfaces</b>				
<b>Management</b>	1 x Gigabit Ethernet, 1 x RS-232 serial console			
<b>Power Supply</b>	Single	Redundant	Redundant	Redundant
<b>Security</b>	SSL and SSH for secure management; per-user locking of engine configuration			
<b>Warranty &amp; Support</b>				
<b>Hardware Warranty</b>	Hardware warranty is included with product license			
<b>Support &amp; Maintenance</b>	Support is included with product license and software maintenance			

### Netropy N61

2 Ports up to 1 Gbps



### Netropy 10G4

8 Ports up to 10 Gbps



### Netropy 10G2

4 Ports up to 10 Gbps



### Netropy 100G2

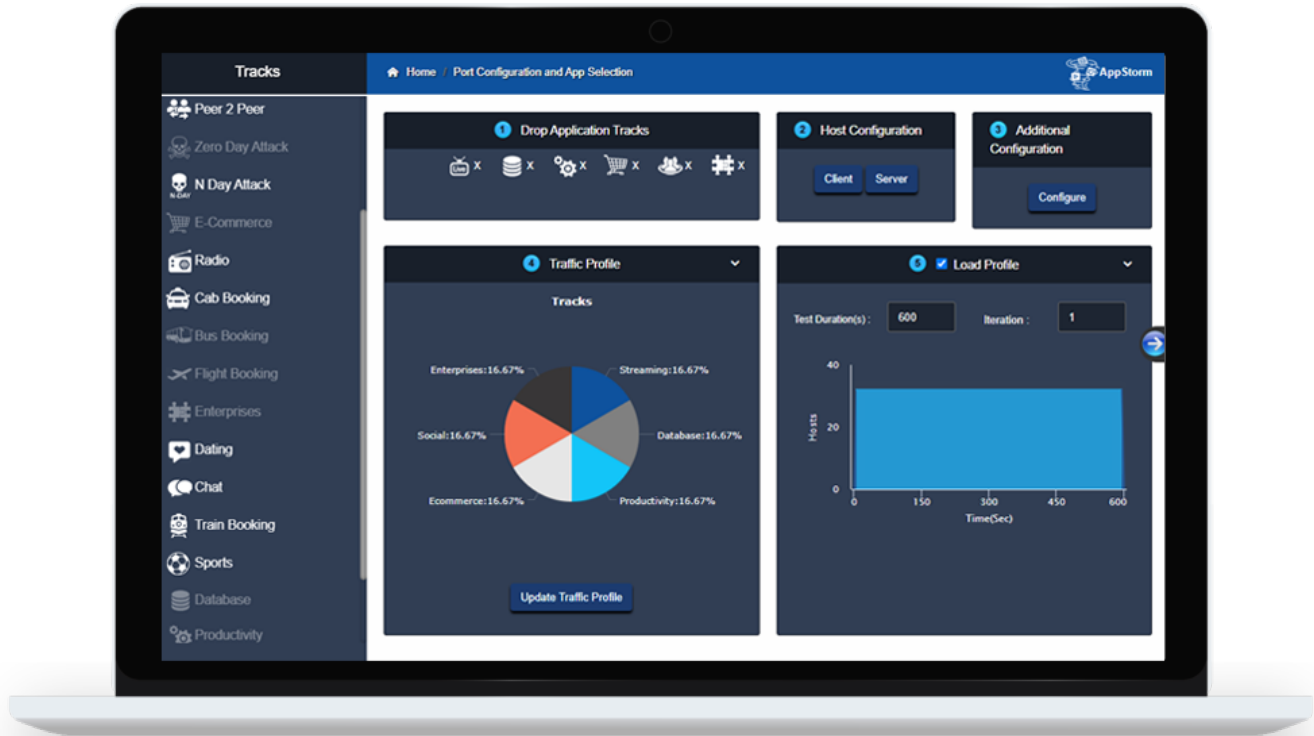
4 Ports up to 100 Gbps



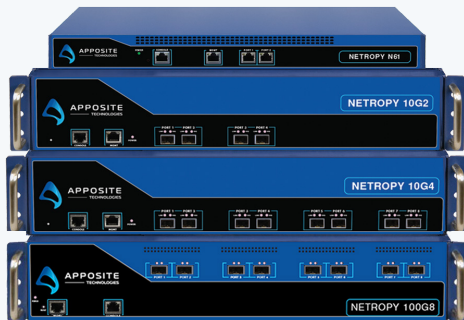
### Netropy Traffic Generation Virtual Edition

Software Version of Traffic Generator  
Up to 10 Gbps

## USER INTERFACE



## Netropy Traffic Generation Solutions



Netropy Traffic Generation Solutions are available on high performance appliances and virtual machines (VMWare ESXi, KVM, Openstack). Configure tests with ease on a modern, browser-based UI or with a comprehensive RESTful API for increased automation. Run multiple tests at once and keep them running in the background, collaborate with your team, and easily connect and perform tests from anywhere. Apposite's

Netropy Traffic Generation solutions can be fully integrated with Apposite's Netropy Network Emulators to create the ultimate real-world test environment.