# Why Corsa NSE7000 Appliance?

The NSE7000 appliance is a security service load balancer that enables organizations to horizontally scale their network security appliances, and provides an easy path to virtualizing network security.

Put the NSE7000 appliance in-line and you get a smart wire that lets you examine every packet, all the time. In other words, 100% traffic inspection. Transparent to the network, with full line-rate performance and ultra-precision, NSE7000 appliance lets you classify and control any packet using any operator-defined rule with a wide choice of actions: accept, drop, rate-limit, copy, redirect, GigaFilter™ ACL and more.

While preserving and leveraging your existing security tools, place the NSE7000 appliance in-line wherever you need it and redirect traffic into physical and virtual security functions. This capability can be increased to include path insights and health checks, the ability to copy traffic that needs out of line inspection, blocking capability to shed bad traffic before it even enters the service chain, additional network performance monitoring for the network team, and extra metadata so security gets even deeper data insights.

Corsa NSE7000 appliance gives network and security teams the ability to inspect 100% of traffic in an easy to deploy, programmable solution that maintains network integrity.

Life of a Packet in the NSE7000 appliance
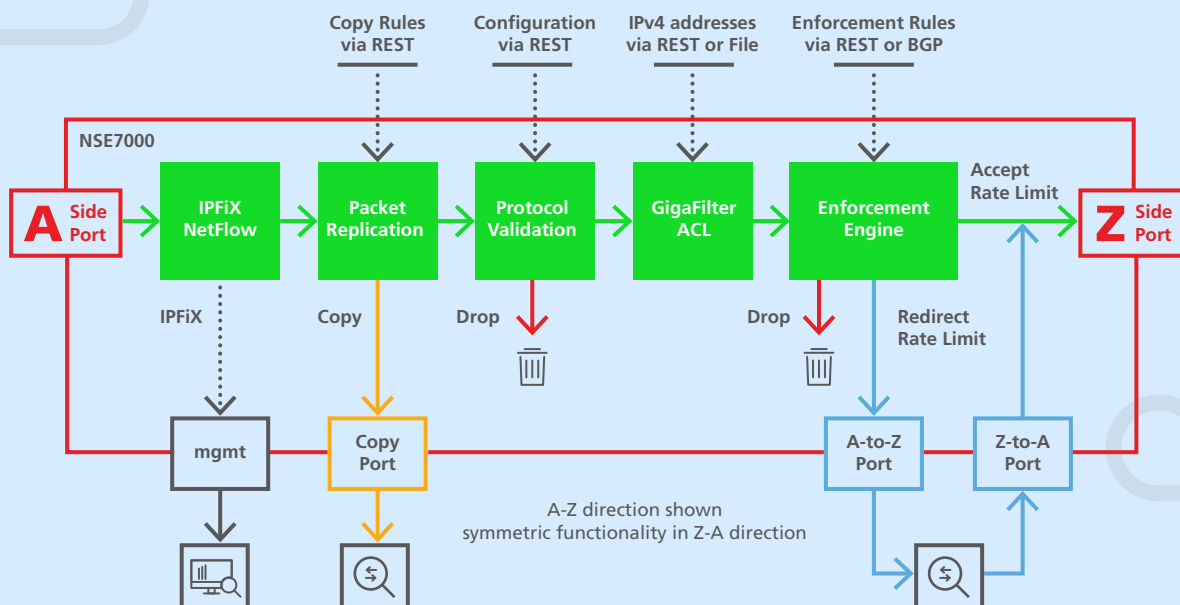
So Easy to Integrate

We built a modern REST based interface right into the platform, which gives you full control of all the functions of the hardware through a simple human readable JSON based API.

- Integrate with machine learning and AI security systems
- Automate rules programming via REST
- BGP listener that understands Flow Spec (RFC5575)
- Integrate into your automation tools or any other security product
- Act on network traffic in immediate response to an alert

Unprecedented Insights

Get extreme visibility into your traffic with separate statistics counters for bytes and packets at every single packet decision point within the device.

- Count packets, bytes and every rule hit with sub-second accuracy
- Real-time visibility
- Available at every stage of the traffic filtering process
- Stats maintained in dedicated hardware
- Read by the OS in sub-second intervals
- Built in Netflow/IPFIX probe

Unmatched Performance

Easily automated and blazing fast. The NSE7000 hardware is thoughtfully architected and purpose-built. Hyper optimized for high speed, maximum programmability and ultimate user control.

- Hardware-based algorithmic search engines for large-scale accelerated search
- DDR3 RAM for off-chip memory offload
- Ultra-fast GDDR5 memory for packet buffering
- Special SRAM for real-time statistics
- Best-in-class ASIC switching fabric
- Intel Core i7 processor with Linux OS dedicated to control and management
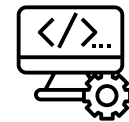
User-defined, programmable rules

The NSE7000 appliance gives you complete control over your traffic instantly and in real-time. Whether you call it flow-based networking, or fine grained traffic control, this security service load balancer lets you write and apply your own rules that can match traffic on every L3 and L4 header field, and then instantly act on each packet accordingly.

- Over 220,000 IPv4 rules in hardware
- Over 60,000 IPv6 rules in hardware
- Actions include allow, deny, rate-limit, copy, redirect
- 4 Billion entry GigaFilter ACL
- Full support for BGP Flow Spec standard (RFC5575)
- Extremely simple JSON based REST API to manage all rules

Uncompromised network speed and scale

Traffic throughput and packet processing is guaranteed to be line-rate regardless of what the NSE7000 appliance is having do in terms of directing traffic to service chains, or blocking an IoT-sourced DDoS attack, or rate-limiting discrete suspicious flows.

- Advanced, patented hardware design guarantees a constant packet processing rate regardless of the number of rules programmed
- 10G, 100G or even more traffic doesn't affect rules match/action performance
- Processes traffic at over 312,000,000 frames/second per 230Gbps

GigaFilter ACL

Another innovative feature that makes the NSE7000 appliance truly unique is our patented GigaFilter ACL, a source-address ACL that can hold 4,294,967,296 entries.

- Filter every possible IPv4 address at the click of a button
- IoT scale: use this to fight large botnets with tens of millions of members
- Automatically upload IOC/TI files
- Traffic allow/deny in <1ms
- Use in conjunction with all other rules and actions in Red Armor

CORSA