DNS Blast

World's Fastest and Most Advanced DNS Cache Security Solution

Highlights:

- Absorb extreme DoS attacks with world's fastest DNS cache performance
- Protect service continuity and data confidentiality with DNS Transaction Inspection (DTI) and behavioral threat detection
- Prevent users from accessing malicious content
- Augment application access control with domain filtering per user
- Improve user experience with ultra-low latency
- Simplify infrastructures with purpose-built DNS security technology and reduce TCO
- Enhance architecture agility with actionable scalability

A New Security Context For Extreme DoS Attacks on DNS Services

Recent months have shown a dramatic increase in the scale, frequency and sophistication of DNS DDoS attacks. Domain name services are for the third consecutive year the most targeted application layer, commonly used by malware to build among the largest volumetric attacks ever seen. At the same time, the latest reports also demonstrated the insidious approach of hackers in building DNS stealth assaults that are not possible to detect with traditional protection systems, aiming to exfiltrate confidential data or causing huge disruption to business operation.

The fast growing deployments of unsecured IoT devices, user mobility and BYOD is amplifying these threats, and calling for a drastic rethink of the DNS security approach through high performance and purpose-built advanced analytics technology.

Only by understanding these new risks and integrating new solutions can you efficiently and proactively strengthen business continuity, data confidentiality and user experience that your company deserves.

DNS Blast™: World’s Fastest and Most Advanced DNS Cache Security Solution

DNS Blast from EfficientIP is a game-changing technology offering a revolutionary approach to DNS security, on all aspects: cache, recursive and authoritative. DNS Blast innovations combine the world’s fastest cache appliance with the most advanced built-in security systems, protecting against the largest spectrum of threats.

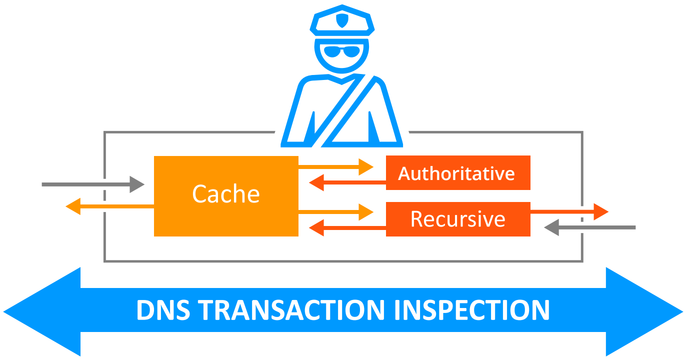
Outstanding Performance for DNS Service Delivery and Protection

DNS Blast cache appliance suite is a unique market solution delivering up to 17 million queries per second to absorb large volumetric DoS attacks, while offering unprecedented robustness, actionable scalability and ultra-low latency. More importantly, built-in advanced security features are delivered at record speed to ensure integrity and continuity of mission-critical DNS services, even during the most critical attacks.

Advanced Security Technologies to Protect Business Continuity and Data Confidentiality

DNS Blast is a purpose-built hardened security cache appliance with embedded patented innovations to intelligently protect against DNS security threats, regardless of the attack type: exploits and zero-day, data exfiltration, DGA (Domain Generation Algorithms), volumetric and stealth attacks. It includes the following advanced security features:

DNS Guardian: The first DNS security solution that enables complete DNS Transaction Inspection and advanced analytics for real-time behavioral threat detection. DNS Guardian overcomes the limitations of signature-based security systems that only offer limited peripheral traffic visibility. Patented smart countermeasures provide unique adaptive security to protect data confidentiality and guarantee unmatched continuity of DNS services, even if the attack source is impossible to identify (such as during a distributed weak signal attack). DNS Guardian can also be configured to act as a transparent proxy - ideal for global RPZ filtering or deep behavioral client traffic analysis in order to filter or quarantine malicious IPs. DNS security policies can be applied on DNS Guardian appliances to enforce behavioral threat detection settings and mitigation configuration over the entire network.



DNS Guardian Innovative Security Framework

Hybrid DNS Engine: The SOLIDserver Blast appliance incorporates two DNS cache engines (BIND & Unbound), managed transparently as a single unit. It provides SmartArchitecture templates, a unique solution to easily design, deploy and centrally manage hybrid DNS architectures mixing servers that are running different technologies. Hybrid DNS Engine ensures the highest level of security to instantaneously mitigate zero-day vulnerabilities and maintain full control of upgrade processes.

DNS Firewall: The DNS Firewall detects, stops or redirects queries from clients that want to access domains and/or IPs known to be malicious. It prevents connected devices from becoming infected with malware, blocks their activity and actively contributes to mitigating data exfiltration risks. Threat intelligence data feed services ensure the dynamic update of these lists (abuse, spam, phishing, malware, or cracked websites) to adapt to an ever-evolving threat landscape.

Client Query Filtering (CQF): complementing the DNS Firewall feature, it is also possible to apply different filters to different groups of clients. By grouping clients based on their IP address or more complex information from the DNS frames, like the content of EDNS extensions, organizations and telcos can apply granular application access control very close to the client before hitting the transit networks and the security filtering solutions. CQF enables advanced use cases like IoT whitelisting or parental control.

High Availability of DNS Services with Flexible LAN & WAN Redundancy

SOLIDserver™ Blast appliance implements state-of-the-art clustering and anycast resiliency mechanisms. The flexibility of the redundancy methods enables the creation of mesh architectures, ensuring immediate and transparent access to the nearest available server to maintain business continuity and the highest level of user experience.

Simplified DNS Architectures to Decrease TCO and Obtain Quick ROI

DNS Blast is a purpose-built DNS security appliance that allows for the drastic simplification of a DNS infrastructure by eliminating dozens of DNS clusters, numerous load balancers and useless firewalls. The DNS server ensures its own protection with performance and security focused on a single point, without the need for complex configurations or the irritating setup of approximate filtering rules.

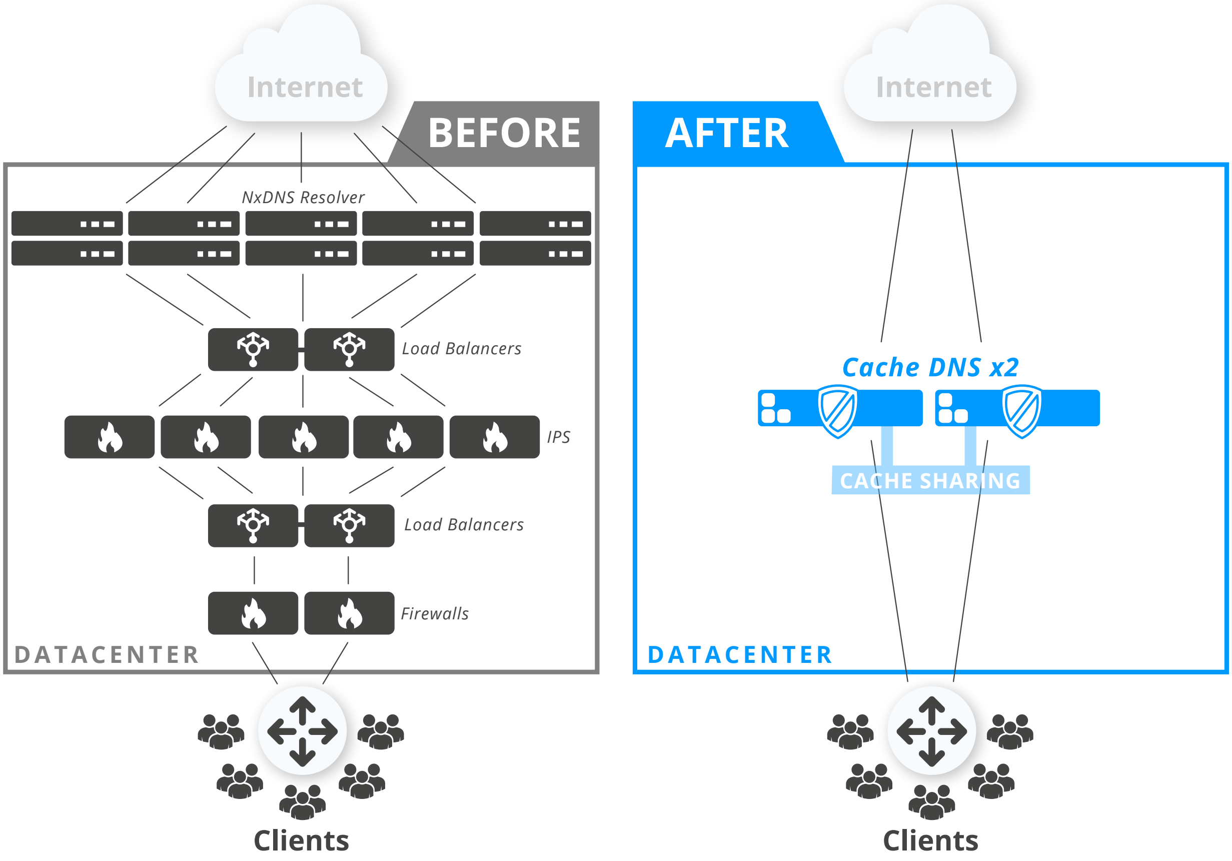
DNS Blast's unique advanced security solution is quick to roll out and maintain, as well as being very economical. As a result, TCO of DNS services is drastically decreased, security markedly improved and unrivalled actionable scalability guaranteed.

Improved Resilience and User Experience with Decentralized DNS Architecture

DNS Blast's purpose-built high performance DNS security appliance enables new architecture designs by deploying servers as close as possible to users through distributed DNS infrastructure, just like CDNs do with their content appliances.

DNS Anycast strengthens the service availability and optimizes the access to the closest point of presence using any common routing protocol (BGP/OSPF/ISIS).

This distributed and disruptive approach improves the overall service robustness and resilience, saves the backbone's bandwidth usage and helps to improve user experience due to ultra-low latency.



Simplified DNS Architecture using EfficientIP Appliances

Enhanced Cache Management

Cache Sharing to Reduce Bandwidth Consumption

DNS Blast offers support for DNS cache sharing relying on IP multicast mechanisms. Sharing the cache enhances the overall performance (hit rate) of the distributed DNS platforms, reducing the DNS service latency. It also decreases the number of recursive queries sent to authoritative servers on the network, minimizing risks of cache poisoning. Combined with the Rescue Mode and the overall security mechanisms offered by the embedded DNS Guardian product, this allows for deployment of a distributed, secured cache and recursive DNS service.

Persistent Cache to Restart with Full Performance

Classic cache functions are flushed after a restart, and need time to be filled by incoming traffic to again offer good performance. When SOLIDserver™ is restarted, the cache is saved, so that the server is immediately prepared for 100% performance delivery. This offers the best possible service to your customers.

Compatible with Existing Architecture of DNS Servers

DNS Blast is an agnostic technology that can be deployed in an overlay of any existing DNS engine. For instance, it can easily be integrated within a Microsoft Active Directory architecture, in order to protect the availability of dependent services such as authentication and email, or deployed inline of an existing DNS cache or authoritative architecture based on BIND.

Support of multi-protocol access

DNS Blast is able to be positioned within enterprises and network providers, facing corporate employees as well as Internet end-users. In specific cases it can be useful to cipher the local DNS traffic between the client and the resolver, which is why DNS Blast supports DNS traffic over UDP (vanilla feature), DNS traffic over TCP and DNS traffic over TLS (also known as DoT). When using TLS, the traffic is ciphered and access can be protected through digital certificates, to prevent eavesdropping on client DNS requests. In addition to DoT, the DNS over HTTPS (DoH) tunneling protocol is also accepted in order to provide the client with browser security using a de-facto standard.

Available as Hardware Appliance or Virtual Version

In order to support all types of corporate network strategies, including private cloud and virtualization, DNS Blast is available as both hardware and software appliances according to the following table:

Appliance	Performance * Hardware Version	Performance * Virtual Version **
BLAST 4070	3M QPS	3M QPS
BLAST 5070	10M QPS	-
BLAST 5570	17M QPS	-

** Listed performance numbers were reached in test environment.*
Performance numbers in production may be different.
M QPS = Million Queries per Second.

*** Requires specific VM properties:*

- *VCPU = 12*
- *RAM = 32 GB*
- *IOPS >= 160 IOPS*
- *Hard Drive >= 128 GB*
- *Dedicated Intel X520 or X710 10GE Chipset in PCI Passthrough mode*

REV: C-210420

As one of the world's fastest growing DDI vendors, EfficientIP helps organizations drive business efficiency through agile, secure and reliable network infrastructures. Our unified management framework for DNS-DHCP-IPAM (DDI) and network configurations ensures end-to-end visibility, consistency control and advanced automation. Additionally, our unique 360° DNS security solution protects data confidentiality and application access from anywhere at any time. Companies rely on us to help control the risks and reduce the complexity of challenges they face with modern key IT initiatives such as cloud applications, virtualization, and mobility. Institutions across a variety of industries and government sectors worldwide rely on our offerings to assure business continuity, reduce operating costs and increase the management efficiency of their network and security teams.

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