efficient iP™
DEFINING SMART DDI

DNS Blast
Benefits

- Eliminate risks before attacks take down your business

- Deploy DNS Cache services that can handle large attacks at ease

- Simplify your DNS infrastructure while maintaining high level of security

- Reduce costs of DNS management and ownership

- Avoid blocking valid DNS queries with inaccurate filtering

- Limit DNS Cache poisoning while always answering queries

DNS Blast
High Performing DNS Cache Against DDoS Attacks

EfficientIP's DNS Blast is the ultimate answer against DDoS threats on DNS Cache. SOLIDserver™ provides a reliable and secure DNS service that supports your business through state-of-the-art technology.

In Q1-2014 there was a large increase of DNS DDoS attacks that used up to 20 Gigabits per second of network bandwidth. This now represents 30% of all DDoS attacks combined. This means that DNS infrastructures when under attack need to absorb 10 to 40 million DNS queries per second!

All companies can be targeted by DDoS attacks and the impact can effect their customers as well. No companies are too small or too large to be impacted, from industrial businesses that rely on equipment connected to the Internet, to e-commerce specialists with websites that cannot afford the slightest moment of downtime. Internet and service providers are not anymore among the first to be exposed and impacted by DNS DDoS attacks.

Companies have long neglected the security of their DNS infrastructures. According to a recent survey from IDC, most companies in North America and Western Europe understood the potential damage and impact that DDoS attacks could have on their DNS infrastructure, but they still chose not to invest in a solution to mitigate the risk of losing business. It is the responsibility of IT managers to make sure that their DNS infrastructure is secure and stable.

DNS Blast is a cache appliance that can support up to 17 millions queries per second. It can handle more bandwidth than the network itself; therefore, the cache will never be saturated, nor corrupted. Using EfficientIP's SOLIDserver DNS Blast appliance, you can confidently provide the DNS service your business deserves. By eliminating dozens of DNS clusters and load balancers, you will dramatically decrease the Total Cost of Ownership, simplify your DNS infrastructure, and increase your level of security.

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DNS Server is Still the Bottleneck, Not the Network

According to the latest Neustar Annual DDoS Attacks and Impact Report, the frequency and size of DDoS attacks is increasing, and the profiles of the targeted companies are also changing.

About 30% of the DDoS attacks are focusing on DNS/UDP protocols. The report shows that 49.8% of the attacks were targeting Media & Entertainment industries, about 9% Financial services, and 16.53% targeted Software and Technology companies.

This represents an increase of 71% over the past year of companies affected by DDoS attacks.

Attacks have become shorter but more frequent. The report shows that over 45% of companies were targeted 2 to 10 times, while over 15% lost count.

In these attacks, the companies' network didn't fail but accepted this bandwidth during the attacks; DNS architecture should be able to cope with this workload to avoid any impact on the business.

High Performance DNS: A Real Call to Action

Today, network infrastructures are robust enough to support most of the bandwidth used during attacks; however, DNS servers have become the weak link of the network architecture for many reasons.

First, if your DNS servers crash and stop answering queries, your users will not be able to connect with their applications, nor will your customers be able to interact with you. In simple words, you lose money and your brand image will be dramatically impacted.

Secondly, the DNS protocol was designed to always answer a query. If for any reason there is latency or time out and some queries do not get resolved, this creates a major security hazard. Your DNS is now wide open for attackers to poison your DNS cache, which means that valid traffic will be redirected to malicious sites where private data can be intercepted and stolen.

During a DDoS attack, the hacker tries to kill the DNS server so that legitimate queries can't be answered, or corrupt the DNS cache so that wrong information is returned. Your DNS server must be powerful enough to receive and to carefully analyze all requests sent to it, in order that le-

gitimate requests are answered even when mixed in with huge numbers of attack queries. By answering all legitimate requests, you can help prevent DNS cache poisoning.

A Smart Innovation for a Smarter DNS Solution

DDoS Protection Today

Most solutions that protect against DDoS attacks on the market today treat the problem by dropping DNS queries that are considered illegitimate. The selection of a good or bad DNS query is based on simple rules using statistical information. This strategy is very dangerous because attackers can easily exploit these rules and behavior.

Simulating a high volume attack with a spoofed IP address, the attacker insidiously starts rule blocking. The systems under attack are becoming overloaded due to the numerous blocking rules, which continuously need to be adapted. It's a complicated, dangerous, and poor solution to mitigate DNS DDoS attacks.

What Is DNS Blast?

EfficientIP SOLIDserver™ DNS Blast solution is a DNS cache appliance that can support up to **17 Million (17M) Queries per Second (QPS)**. Best of breed DNS servers today can only withstand up to **300 Thousand (300K) Queries per Second (QPS)**. This is not enough to secure your business from today's DNS DDoS attacks. To absorb and cope with this amount of traffic, the only solution up until now was to install dozens of DNS servers and Load-Balancers to support the workload including the increasing of management, operational and (high) cost issues.

SOLIDserver™ DNS Blast will dramatically decrease the Total Cost of Ownership, while maintaining a robust DNS architecture and a high level of security; all this with limited management needs. With our solution, a smaller number of appliances will be required to support high bandwidth DDoS attacks (or legitimate DNS loads). Smaller numbers also mean easier maintenance, configuration, operation, and management with an immediate remediation of most DNS DDoS threats.

The innovative technology developed for our DNS Blast solution will always scale to your needs. EfficientIP consultants and certified EfficientIP partners can help you size and select the best DNS architecture at the most efficient cost, to help you achieve the highest level of security your business deserves.

DNS Service Without DNS Blast
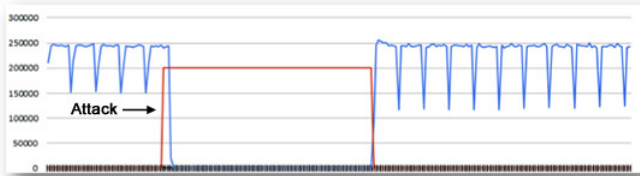
DNS Service With DNS Blast

Advanced Cache Administration

DNS Guardian also includes features to optimize your DNS infrastructure.

Cache Sharing to Reduce Bandwidth Consumption

DNS cache can be synchronized between several EfficientIP DNS servers, to reduce network bandwidth consumption as fewer resolutions are sent to the authoritative server. All servers benefit from any resolution done by the others. It also reduces opportunities for cache poisoning.

Cache Restart with Full Performance

Classic cache functions are flushed after a restart and need some time to be filled again by incoming traffic to offer again good performance. When SOLIDserver is restarted, it first saves the cache, so that after the restart the cache is ready to perform at 100% performance. It offers the best service possible to your customers.

ABOUT EFFICIENTIP

EfficientIP solutions address organizations' needs to drive business efficiency through the innovative use of IT. Its unified management framework for DNS-DHCP-IPAM, devices and network configurations enhances security, availability and agility of the IT infrastructure. EfficientIP's solutions have been chosen by hundreds of the most demanding organizations across all industries.
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