SECURE64®

Secure64® DNS Cache x86™

Secure, scalable caching DNS

DATA SHEET

DNS CACHE

DNS CACHE FOR X86™

KEY BENEFITS

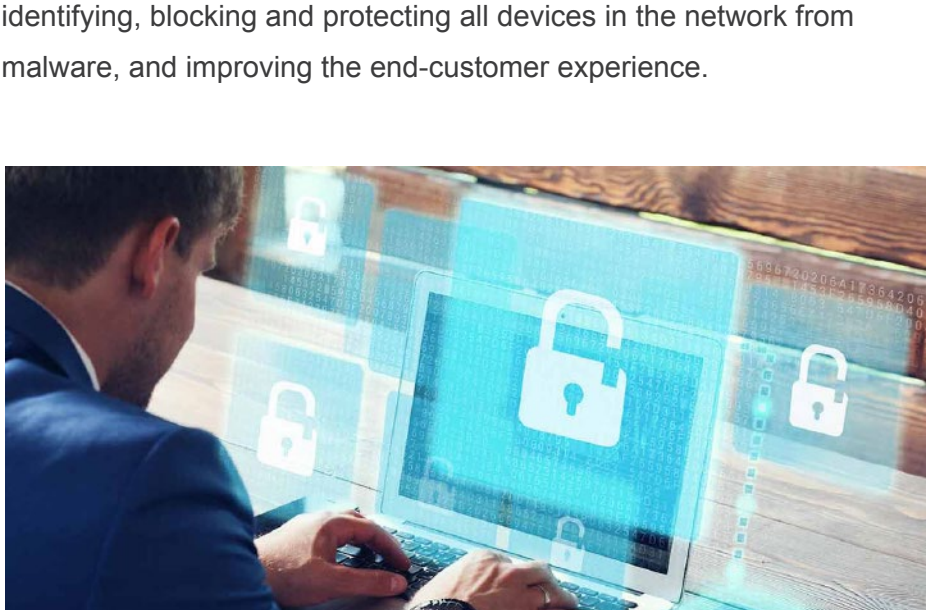
- Protects against DDoS attacks, including PRSD
- Eliminates BIND security vulnerability patching
- Enables 99.999% service availability
- Simplifies integration with external software systems
- Scales up without requiring hardware upgrades
- Reduces TCO because servers need no protective security appliances

KEY FEATURES

- Secure kernel eliminates entire classes of vulnerabilities
- Built-in advanced DDoS protection
- Non-BIND based DNS
- Dynamic configuration changes
- Comprehensive RESTful API
- Physical or virtual appliances
- License-controlled capacity

Ensuring DNS security became a primary concern of service providers with the escalation and severity of denial-of-service attacks on the DNS and the steady stream of security vulnerabilities in BIND. Designing an infrastructure that can withstand today's attacks can be expensive and complicated, while performing emergency vulnerability patching of the DNS is both disruptive and time consuming. At the same time, rising query loads makes capacity planning more challenging, especially in order to avoid future costly DNS server additions or upgrades.

Secure64 DNS Cache for x86 is secure, scalable, carrier-grade caching DNS software, providing built-in protection against high volume Denial-of-Service attacks and immunity to BIND-specific security vulnerabilities. DNS Cache for x86 also serves as a secure, scalable platform for DNS Guard, a family of powerful and cost-effective security services. DNS Guard™ eliminates malicious traffic on the network by identifying, blocking and protecting all devices in the network from malware, and improving the end-customer experience.



Industry-leading Security

The Secure64 name reflects our heritage and focus: we offer truly secure platforms for mission-critical, carrier-grade DNS.

Built-In DDoS Protection

DNS Cache for x86 provides fine-grained DDoS detection and mitigation rules, allowing the server to continue to respond to legitimate queries while dropping queries from attackers, unlike conventional DNS solutions that crash or become unavailable at much lower levels of attack traffic. The system can be configured to monitor and throttle traffic to a user specified level or drop traffic from clients that exceed normal use patterns, such as excessive bandwidth consumption or excessive IP packet rates in general, or IPv4 or IPv6 packets in particular. Additionally, DNS Cache for x86 has built-in protection against Pseudo Random Subdomain attacks, allowing it to remain available even when bombarded with queries for non-existent domains.

Non BIND-based DNS

BIND is the most widely deployed DNS software in the world, which makes it a primary target for attackers seeking to cause maximum worldwide damage. DNS Cache for x86 is a completely different implementation that shares no code with BIND, making it immune to all BIND-specific vulnerabilities.

Secure kernel

DNS Cache for x86 features a secure kernel which completely eliminates entire classes of vulnerabilities, including buffer overflow attacks and remote code execution. Those eliminated classes are typically associated with the most critical vulnerabilities so the need to “drop everything and patch” is greatly reduced. Additionally, overall patching is significantly reduced, saving on costs.

Cache poisoning protection

In addition to industry standard source port randomization and 0x20 defenses against spoofed responses, DNS Cache for x86 supports all of the DNSSEC RFCs, providing maximum protection against cache poisoning attacks.

Network security services

Protecting users and the network from malicious activity is becoming increasingly important for both legal and operational reasons. Malicious sites infect clients with malware, which, in turn, use the network to send spam, conduct fraud or participate in Denial-of-Service attacks. DNS Cache for x86 supports the DNS Guard security services, which identify and block infected devices before they can cause damage. DNS Cache for x86 also allows the definition of one or more internal lists of undesirable domains and specification of whether queries for domains on a list are to be dropped, responded to with an error, or redirected to a portal or walled garden where information and remediation instructions can be provided to the client.

High Availability

Non-stop restarts

The DNS is a mission-critical networking service that must always be available to service client requests. Conventional DNS servers must be restarted to make changes to configurations or to turn on diagnostic tools. DNS Cache for x86 allows changes to a running server to be made on the fly, including rules modification, with no loss of service continuity, ensuring that the service can meet even the most stringent availability requirements.

Anycasting with Fast Failover

BGP anycasting has long been deployed by root and top level domain operators as a best practice for high DNS availability and resiliency. DNS Cache for x86 not only supports BGP anycasting, it allows it to be augmented by Bidirectional Forwarding Detection (BFD) for sub second failover in the event of a server failure, thus ensuring high levels of DNS service continuity.

Scalable Performance Throughput

DNS Cache for x86 provides the highest performance of any resolver software, minimizing hardware resources required and saving on both capital and operating expenses.

Scaling

Users can license only the capacity that they need. When additional capacity is required, it can be provided through a simple license upgrade with no need to change hardware, providing significant cost savings. License upgrades are applicable to both virtual and physical products.

Simple Management and Monitoring

SNMP

DNS Cache for x86 allows customers to monitor the network, operating system and application in real time, while supporting a variety of leading network monitoring systems. Detailed information is available through SNMP v3, allowing the monitoring system to easily determine the server’s availability, security and operational health in real time.

Centralized management

DNS Cache for x86 servers can be managed individually, or can be centrally managed and monitored through Secure64® DNS Manager™. DNS Manager simplifies the management of a large DNS network by managing configurations and revisions, upgrading software versions, managing and synchronizing blacklists and monitoring key performance indicators across multiple Secure64 servers in the network.

Real-time Statistics

DNS Cache for x86, when combined with DNS Manager, provides real-time statistics including the top clients querying the server and the top fully qualified, top-level and sub domains queried. These statistics can provide new insights into legitimate as well as abusive DNS behavior.

RESTful API

DNS Cache for x86 provides a comprehensive RESTful API, simplifying the integration of the product with orchestration software and other external applications.

Appliances

Virtual appliances

- VMware ESXi
- KVM

Physical appliances

- SNS-3000
- SNS-5000

Resources/Performance

DNS Cache for x86 is available with several different capacity licenses:

- 600k qps
- 300k qps
- 150k qps
- 75k qps
- 35k qps
- 20k qps

Contact your Secure64 sales representative for detailed information on virtual machine resource requirements.