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High-performance DNS caching for ISPs

THE INDUSTRY'S MOST ROBUST AND COST-EFFECTIVE DNS

DNS is no longer a nice-to-have service—your customers cannot function without it. Your DNS caching infrastructure needs to be as robust as you can make it. Designed for service provider environments requiring scalable edge deployments and available in multiple form factors including virtualized NFV options and carrier-grade appliances, Infoblox DNS Cache Acceleration solutions are designed to handle the "perfect storm" of future 5G and edge-based applications that require ultra-low latency – supporting DNS query rates up to five million queries per second as a standalone appliance. Through centralized management, network operators can quickly instantiate, implement, and auto-scale network services and manage those services more efficiently through a unified family of devices. Infoblox virtual appliance software leverages x86 hardware virtualization technology to provide ultra-low latency of 50 microseconds on average.

By leveraging multiple DNS Cache Acceleration appliances in a distributed Infoblox Grid™ configuration, billions of queries per second can be processed. Besides raw DNS transaction capability, Infoblox DNS Cache Acceleration delivers unprecedented low levels of DNS query latency. This enables traffic from the latest applications such as Internet gaming, virtual reality/augmented reality, content sharing, and social media to be handled, giving customers a rapid Internet response time that ultimately ensures a high level of user satisfaction. In addition to providing flexibility and operational control, Infoblox provides labor scalability, enabling ISPs to grow their infrastructures without adding operations support staff. The Infoblox Grid™ architecture enables distributed appliances to be effectively managed from a central location or several regional locations, ensuring that configurations can scale without operational limits.

INFOBLOX SOLUTIONS FOR SERVICE PROVIDERS

Infoblox delivers the industry's most comprehensive set of capabilities for IP network automation, availability, and control. Infoblox gives mobile operators, telcos, and ISPs the performance they need to generate profitable service revenue streams and ensure the highest customer satisfaction levels. Our leading-edge capabilities include full IPv6 support with auto-discovery, dual-stack IPv4/IPv6 operation, DNS64, DHCPv6, blacklisting, NXDomain redirection, and fully automated IP address management.

POWERFUL, INDUSTRY-LEADING SOLUTIONS

Infoblox offers the most robust and cost-effective DNS caching infrastructure solutions:

- Sub-millisecond response and advanced threat protection maintains a low latency and a secure subscriber experience.

- Reduces the cost of ownership—do more with the same headcount by eliminating repetitive and labor-intensive server administrative tasks and eliminating generic server support costs.

- Improves reliability with automated HA/DR—reduce downtime by eliminating slow, manual, error-prone upgrade processes.

- Increases security by eliminating generic servers—our appliance-based solution has no root access.

- Become more responsive to changing business needs—our distributed approach enables rapid upgrades via Infoblox Grid and enables a more flexible response to network architecture/topology changes.

SUPPORTS SERVICE PROVIDER NETWORK VIRTUALIZATION ADOPTION

Infoblox DNS Cache Acceleration is an easy software subscription add-on to the latest generation of our IB-FLEX and Trinzic appliances. By leveraging DNS Cache Acceleration as a simple software add-on, you are better prepared for network growth, cloud migration, SD-WAN and more. Infoblox DNS Cache Acceleration leverages existing hardware, which means that providers only need to upgrade software that runs on the hardware resulting in minimal incremental cost for upgrades.

INFOBLOX DNS CACHE ACCELERATION SPECIFICATIONS

The Trinzic appliance family offers deployment flexibility. Appliances can be deployed as physical appliances or virtual appliances on-premise.

Performance Specification			
	Trinzic 2215	Trinzic 2225	Trinzic 4015/4025
DNS Queries per Second*	150K	300K	2M
Hardware Redundancy	Hot-swappable, redundant power supplies, fans, and four disks RAID-10		
Virtual Appliances Supported	Yes		

BUILT-IN PROTECTION FOR DNS AGAINST DDOS AND STEALTH ATTACKS

DDoS and other attacks on DNS infrastructure now almost a daily occurrence at most service providers. Infoblox Secure DNS caching with Advanced DNS Protection for Service Providers maintains service availability during malicious attacks. Service degradations and outages are a significant cause of subscriber dissatisfaction. Attacks targeting provider network DNS infrastructure can cause service degradation, slow DNS response, and impede subscriber access to favorite web sites. Available as a virtual add-on with software subscription pricing, Advanced DNS Protection for Service Providers maintains service availability and critical DNS functionality and performance during a volumetric DDoS attack or unexpected traffic spikes generated by misconfigured devices, emergency situations, or network outages.

LOWER TCO FOR MANAGING THE DNS INFRASTRUCTURE

While non-stop DNS is critical for your customers, the cost of maintaining it is paramount for you. Infoblox appliances for high-performance DNS caching reduce the cost of operating, maintaining, and upgrading your DNS infrastructure. Infoblox appliances remove the security, reliability, and administrative issues associated with the generic server and OS management—the Infoblox Grid™ helps you automate and manage appliance upgrades and patches from a single point—no more server-byserver scripting and patching. And with new automated solutions for managing DNSSEC, IPv6, and DNS64, we help you stay current with the latest standards developments and keep your service running—without an army of support staff.

*The stated performance numbers were derived in an Infoblox test environment.
Actual performance in live production environmentsmay be different.*

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Infoblox unites networking and security to deliver unmatched performance and protection. Trusted by Fortune 100 companies and emerging innovators, we provide real-time visibility and control over who and what connects to your network, so your organization runs faster and stops threats earlier.

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