

Large North American Mobile Operator



Profile

The customer:

A mobile carrier within a large national integrated communications provider

The challenge:

- Eliminate platform dependencies
- Reduce the need for server patching, hardware and software integration, and troubleshooting
- Reduce DNS latency to improve customer experience without increasing management burden

The solution:

- Infoblox Grid™
- 20 Infoblox 4010 DNS caching appliances

The results:

- Reduction of DNS latency by placing points of presence closer to customers
- Elimination of DNS response time as a source of customer experience problems

The Customer

The customer is a mobile carrier within a large North American national integrated communications provider. It provides a range of mobile voice and Internet services to consumer and business customers.

The Challenge

Following a period of unreliable Domain Name System (DNS) system performance, the operator needed to move away from open-source DNS software running on generic server hardware. The evaluators favored an appliance solution as a way to eliminate platform dependencies, and to reduce the need for server operating system (OS) patching, hardware and software integration issues, and troubleshooting issues.

Operationally the customer needed to maintain a sound customer experience by reducing DNS latency as a main cause of long customer response times—a key parameter that affects customer experience and therefore impacts customer churn. One way to reduce DNS latency is to distribute DNS servers to the network edge, but a distributed DNS system places considerable strain on the internal operations team that supports the remote DNS server population.

Therefore a key factor in the evaluation was the ability to manage multiple distributed DNS servers remotely from a single central location. Also a factor was the ability to provide automated failover in disaster-recovery scenarios.

The Infoblox Solution

The evaluation team worked with the operator's mobile system integration partner, who recommended Infoblox for appliance-based DNS server solutions. Over 20 Infoblox 4010 DNS caching appliances were deployed in 6 locations across the country, controlled by the Infoblox Grid™. The central Grid Master appliance provides a complete repository of all DNS server configurations and status, visible from a single web-based GUI console. Failure of a single appliance is handled automatically by local high-availability pairing of appliances. When a new appliance is installed, it is given an IP address and calls the Grid Master to download its configuration automatically.

The Grid enables remote configuration and automates many routine, manual server administrative tasks, freeing up key technical staff while eliminating the risk of outages due to manual configuration errors. The Grid also automates disaster recovery failover—without manual scripting or command line interface (CLI)-based configurations.

The central administrative GUI enables all DNS conditions at every server to be viewed from one console and all configurations and updates to be applied from the Grid Master automatically. For larger server populations this saves considerable operations time.

The customer deployed DNS appliances in a Grid, with server placement in high-availability pairs. The central management and visibility of the Grid made it possible to distribute servers close to customers to maximize availability and minimize DNS latency—without stressing the internal operations team.

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The Results

As a result of converting the DNS system to Infoblox, the operator has been able to successfully migrate its DNS server infrastructure out to the edge of the network and to reduce DNS latency by placing DNS points of presence (PoPs) closer to customers. This would have been extremely difficult to do with generic servers running open-source DNS software, since each server would need to be managed individually, whereas the Infoblox system enables shared configurations and automated updates across the entire DNS appliance server population. The high-performance Infoblox DNS caching servers also enable DNS latency of less than 3 milliseconds to be achieved—effectively removing DNS as a source of response time degradation from a user perspective.

About Infoblox

Infoblox (NYSE:BLOX), headquartered in Santa Clara, California, delivers network control solutions, the fundamental technology that connects end users, devices, and networks. These solutions enable more than 7,000 enterprises and service providers around the world to transform, secure, and scale complex networks. Infoblox (www.infoblox.com) helps take the burden of complex network control out of human hands, reduce costs, and increase security, accuracy, and uptime.