

## CASE STUDY

# Once a Latency Issue, DNS Becomes Major Telco Operator's Most Effective Enforcement Point with Infoblox

## THE CUSTOMER - MAJOR NORTH AMERICAN WIRELESS OPERATOR

The customer is a major North American wireless provider offering LTE mobile phone and data services to an extensive retail and business customer base.

## THE CHALLENGE

### Maintaining Performance as Smartphone Adoption Skyrockets

The wireless operator was using BIND as its primary DNS caching solution for the mobile network. This set of caching servers handled all cached DNS queries for the entire mobile subscriber base. As subscribers were added to the network, the latency for DNS queries increased significantly on the legacy BIND servers.

This was a significant cause for concern since smartphone response time during web browsing, content sharing, and social media downloads is a critical factor affecting customer satisfaction, increasing customer churn and reducing average revenue per user (ARPU). Faced with explosive traffic growth as smartphone sales skyrocketed, the network team needed to reduce DNS latency to keep customers happy as DNS traffic levels increased. To keep latency low, the operator distributed video content endpoint servers to the network edge, placing content closer to customers by placing DNS servers alongside the content servers.

BIND was historically the first and most commonly deployed DNS management solution and familiar to network engineers, but over time, could not keep pace with the growing service provider's environments. Since it requires customized scripting and manual intervention, BIND can be challenging to maintain. It lacks modern APIs for DevOps integrations and is not hardened against cyber threats. Worse yet, this once widely-used management solution is facing

**Customer:** Major Wireless Operator  
**Industry:** Telecommunications Service Providers  
**Location:** North America

### OBJECTIVES:

- Reduce latency for bandwidth-hungry smartphone applications
- Deliver improved user experience
- Introduce scalable and lower maintenance DNS solution

### RESULTS:

- Automation reduces manual server administration and support costs
- Greater visibility into capacity planning and troubleshooting
- Network scalability

### PRODUCTS:

- NIOS DDI

a dwindling pool of experts as these critical skillsets move on. For this telco provider, the day-to-day administration of additional remote BIND servers was becoming very costly and time consuming for the small operations group to manage. The operator needed to manage multiple DNS servers remotely from a central location.

## THE SOLUTION

### A Highly Distributed Grid Architecture

Infoblox provides a centralized management approach for the operator's highly distributed DNS architecture using the Infoblox Grid to automate routine daily server administration tasks. The Infoblox Grid manages the entire population of Infoblox DNS server instances from a single central management console and a single database that archives all DNS server conditions, configurations, and status information. All DNS server upgrades and patches can be performed by updating the central Grid primary instance, which automatically updates all the other instances in the Grid and eliminates the need to update each instance individually. The Grid also manages local and remote server failover if failures occur, ensuring seamless disaster recovery and a high level of service integrity for users. With Infoblox, providers can secure their DNS. They can pervasively protect the network from DNS threats that BIND can't see or defend, automatically stopping malware, ransomware, and data theft by turning DNS into the network's most effective enforcement point.

## THE RESULTS

### A Scalable DNS System Supporting Smartphone Users Insatiable Appetite

Since installing NIOS DDI and the Infoblox Grid, the operator has experienced decreased operational support costs and can now scale and expand its network quickly and efficiently. It has eliminated the complexity of traditional BIND implementations and consolidated core network services on a common platform. Subscriber count and traffic levels continue to grow without compromising DNS latency or user response times.



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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