

SOLUTION: DNS PROXY FOR BROADBAND COMMAND CENTER

BOOST SERVICE AVAILABILITY AND REDUCE CHURN RISK FOR VOIP DEVICES



DNS PROXY SERVER ELIMINATES THE NEED FOR DYNAMIC DNS

PRODUCT HIGHLIGHTS:

1

Eliminate dynamic DNS updates that result in poor synchronization and VoIP service downtime

2

Simplify IP to domain name mapping with a lightweight proxy server

3

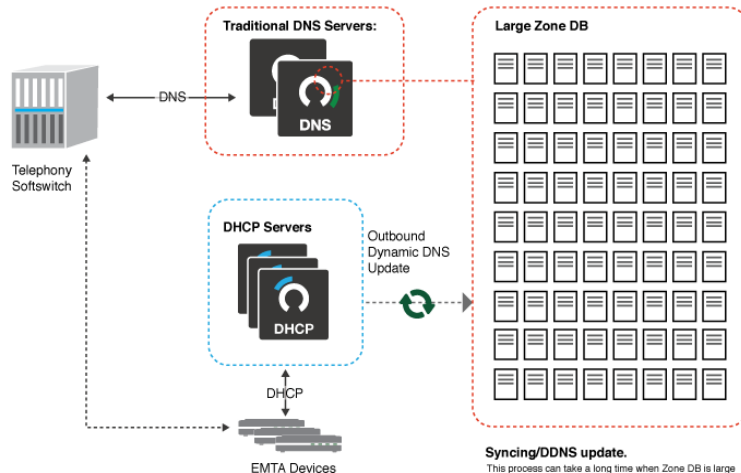
Efficiently balance DNS query load across all DHCP servers in a zone

4

Integrate seamlessly with existing or updated network topology

INCREASE VOIP SERVICE RELIABILITY AND ELIMINATE DYNAMIC DNS

Outbound Dynamic DNS Update



After DNS Proxy Deployment

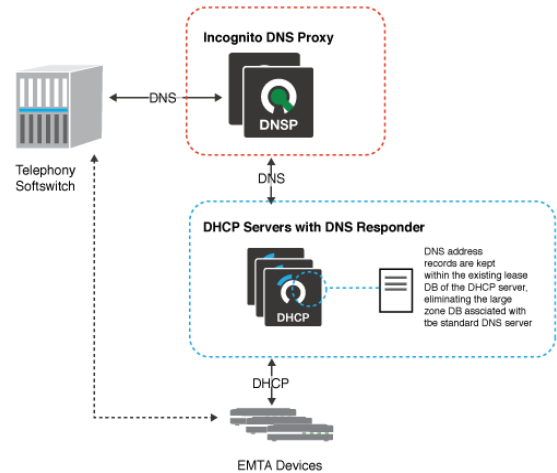


Figure 1: Aside from requiring a huge domain in the DNS server, the traditional method of DNS deployment requires the DHCP service to track all DDNS deployment updates and write them to a large zone DB -- a processor and disk-intensive undertaking. With DNS proxy, the information is written to a disk regardless and responding to DNS queries is a low effort task, but most importantly, the large zone DB is replaced with a lightweight DNS server.

The ability to implement and manage dynamic DNS is essential for secure and reliable subscriber VoIP devices. However, dynamic DNS updates can pose significant challenges for large Tier 1 and 2 operators.

This is because in large operations, the “zones” or domains grow to be very large, which can make synchronization between DNS servers and DHCP servers problematic. For example, a Tier 1 operator could potentially grow to have millions of records in a single domain. DNS servers in these environments become difficult to operate and maintain, resulting in unreliability and unavailability of voice services. In worst-case scenarios, there may be significant lag time if resynchronization is needed between the DNS and DHCP servers — anywhere from 30 to 60 minutes — during which voice services stop working.

How can you continue to dynamically assign IP addresses, but reduce the risk of downtime for VoIP services?

Incognito DNS Proxy, a Broadband Command Center module, resolves dynamic DNS (DDNS) reliability issues by replacing the DNS server with a lightweight proxy server. This

proxy server sends DNS requests directly to the DHCP server, eliminating the need for DDNS updates that can create VoIP service downtime.

The DHCP server already knows the relationship between the IP and FQDN since it is the authority on IP-FQDN mapping. This means Incognito DNS Proxy can request the mapping directly from the DHCP server without the necessity for completing DDNS.

As a result, DNS synchronization is no longer a concern since the DHCP server is where the IP-to-FQDN assignment originates. The end result is increased reliability of the DNS solution, less chance of subscriber service downtime, and by association, reduced risk of customer churn.

DNS Proxy Delivers Reliability and Flexibility

Reduce the chance of VoIP service downtime and subscriber churn with Incognito DNS Proxy. This module replaces existing authoritative DNS servers by moving the responsibility for responding to DNS queries to the DHCP server. The result is increased reliability of DNS server platforms and reduced VoIP downtime.

Increase Customer Retention

Incognito DNS Proxy eliminates service downtime related to DNS-DHCP synchronization to avoid unwanted subscriber service interruptions. This lightweight server removes the need for dynamic DNS updates, proxying information directly from the DHCP server to the DNS requester, such as telephone switches and subscriber devices.

Reduce Maintenance Activities

DNS servers become unwieldy and difficult to operate and maintain in large operations. Incognito DNS Proxy significantly simplifies the authoritative DNS solution by moving the responsibility of responding to DNS queries to the DHCP server.

Utilize Existing Investments

Make the most of existing device provisioning investments with a solution that enables higher availability of mission-critical systems. Incognito DNS Proxy integrates directly with Broadband Command Center to enable seamless operations.

Improve Efficiency with Load Balancing

In environments where there are many DHCP servers in a large zone, the solution balances the DNS query load across all DHCP servers in the zone. This helps to further improve efficiency and reduce quality of service issues. The solution can automatically handle network topology reconfigurations, allowing for flexibility and growth of DHCP architecture.

THE INCOGNITO PHILOSOPHY

Broadband service providers worldwide use Incognito software products to solve their device provisioning, network intelligence, resource management, and service activation challenges. In addition to helping you increase operational efficiency and monetize IP-based services, Incognito also delivers:

**Flexible
Modular
Solutions.**

Get software solutions that fit your needs, not the other way around. Our extensive toolkits and experienced integration experts ensure that you can easily integrate any Incognito solution into your existing systems.

**Customer-
Centric
Approach.**

Be heard. We listen to and take your suggestions seriously. That's why 80% of new product features are a direct result of customer feedback.

**Support
Services.**

We're committed to your success. Our experienced professional services team can design custom solutions to suit your needs, while our support team is available 24/7 to answer your questions.