

netElastic

How Next Gen Fibre Achieved Nationwide Scale and 5-Star Reliability with netElastic vBNG & CGNAT

- **Huge Reduction in Support Tickets**
- **Capacity Scaling in Hours vs Weeks**
- **Conserved IPv4 Addresses**
- **Seamlessly Integrated with Splynx**



Executive Summary

Next Gen Fibre was formed with a bold mission: to bridge the digital divide across Ireland. Born from the merger of four prominent regional ISPs—**MTS Media, Premier Broadband, Bay Area Networks, and C2C Broadband**—the newly unified company set out to deliver high-performance, reliable broadband to both rural and urban communities nationwide.

To turn this vision into reality, Next Gen Fibre needed to replace a fragmented, bottlenecked legacy infrastructure with a unified, carrier-grade network core. By partnering with **netElastic** and deployment partner **ITcare**, Next Gen Fibre successfully transitioned to a software-defined virtual Broadband Network Gateway (vBNG) with integrated Carrier-Grade NAT (CGNAT). The result is a highly stable network, an all-time high in customer satisfaction, and the ability to scale capacity for thousands of new subscribers in a matter of hours.

The Challenge: Overcoming Legacy Bottlenecks

Prior to the merger, the individual ISPs relied heavily on legacy MikroTik routing hardware. As subscriber demand grew, this setup quickly reached its limits, creating critical operational hurdles:

- **Capacity & Bandwidth Caps:** Hardware-based limitations restricted overall bandwidth, preventing the company from offering higher-tier speed packages.
- **Frequent Outages:** Legacy gear struggled under heavy loads, causing intermittent network instability and service outages that frustrated subscribers.
- **Configuration Mismatches:** The existing configuration was rigid and failed to align with the dynamic routing and bandwidth needs of a rapidly expanding modern ISP.

- **Scalability Roadblocks:** Expanding the network core to support a unified, nationwide customer base was virtually impossible with the existing hardware-centric model.

The Solution: Selecting a Future-Proof Network Core

Next Gen Fibre established a strict set of criteria for its next-generation network architecture:

1. **Robust Subscriber Management:** The system had to scale seamlessly alongside aggressive subscriber growth.
2. **IP Address Conservation:** Integrated CGNAT was mandatory to conserve scarce IPv4 addresses efficiently without requiring expensive third-party hardware.
3. **Seamless Integration:** The solution needed to natively integrate with Next Gen Fibre's existing [Splynx ISP Billing & Network Management System](#) and other legacy network elements.
4. **Cost-Effectiveness:** It had to deliver carrier-grade performance without the prohibitive price tag of traditional proprietary hardware routers.

netElastic's virtual BNG (vBNG) with integrated CGNAT emerged as the clear winner, addressing every requirement in a highly flexible, software-based package.

The Implementation: Speed and Collaboration

The migration to netElastic was executed with remarkable speed.

To ensure a seamless transition, Next Gen Fibre collaborated with [ITcare](#), a network engineering and managed services provider with deep expertise in netElastic deployments. Together, they integrated netElastic's vBNG directly with Next Gen Fibre's [Splynx AAA \(Authentication, Authorization, and Accounting\)](#) system.

Because netElastic is designed for open-source and standard API environments, the integration required minimal customization. The network core was upgraded quickly, minimizing downtime and instantly shifting traffic to a more stable, virtualized environment.

The Results: Unprecedented Stability and Rapid Scaling

Since deploying the netElastic solution, Next Gen Fibre has transformed its operational efficiency and customer experience:

- **Exceptional Stability:** Network outages have been virtually eliminated. Performance is highly consistent, even during peak usage hours.
- **Drastic Support Ticket Reduction:** With a stable network core, customer friction has plummeted.

- **Agile Capacity Scaling:** Next Gen Fibre can now spin up network capacity dynamically. Instead of waiting weeks to provision and install physical hardware, network engineers can deploy resources virtually.

"Since adopting netElastic, we've seen a huge reduction in support tickets and phone complaints. Customer satisfaction is at a much higher rate. As our growth continues, we can now spin up capacity for 5,000 new subscribers in hours instead of weeks."

— Liam Keohan, General Manager at Next Gen Fibre

"Consolidating four networks onto one subscriber edge is where these projects usually stall, because no two legacy platforms handle AAA the same way. netElastic gave us a standard API surface and native Splynx integration, so most of the work was validation rather than custom development. That is the reason the cutover took days and not months."

— Andrian Visnevschi, CEO & CTO, ITcare