Utah Telecom Redefines Perception of City-Operated Service Providers

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Bryan Perry | Assistant Director
Spanish Fork Community Network

CASE STUDY

COMPANY

Spanish Fork Community Network (SFCN)

INDUSTRY

Service Provider, Government

NETWORK SOLUTION

A10 Thunder CGN

CRITICAL ISSUES

- Growing customer base and addition of new services were exhausting existing IP range
- Purchasing additional IPv4 addresses was cost-prohibitive
- Current budget didn't allow for IPv6 conversion
- Sought cost-effective carrier-grade networking (CGN) solution for address translation to expand IP range and be scalable for future IPv6 objectives

RESULTS

- Reclaimed existing IPv4 space while laying groundwork for future IPv6 initiatives
- Deployment helped expand customer base and increase revenue stream
- Delivered feature-rich functionality at a cost-effective price point
- Valued A10's flexibility, support and service that was delivered to a smaller organization ignored by traditional networking vendors

Spanish Fork Community Network (SFCN) deploys A10 Thunder® CGN to grow their customer base by expanding its IP range and bridging the service provider's future to the IPv6 address standard.

Doing More with Less

Pushing the technology edge, particularly for small but aggressive service providers, comes with challenges. That was the predicament for Spanish Fork Community Network (SFCN), a city-owned telecom in Spanish Fork, Utah, that operates a municipal network to deliver telephone, digital TV and Internet services to the growing community.

Spanish Fork was innovative in its mission to expand product offerings and begin delivering fiber connectivity to residents. But as the company's loyal customer base grew, they knew they'd need to soon expand their IPv4 address space. Unfortunately, discarding their legacy investments and upgrading hardware to the IPv6 standard was cost-prohibitive.

Spanish Fork Community Network assistant director Bryan Perry needed a smart, cost-effective strategy that could solve his current IP demands but still allow growth for the future.

Solving the IP Dilemma

With each successful year, Spanish Fork's IP address space tightened. A solution was needed immediately. Perry and his team aimed to be proactive to satisfy budget thresholds without affecting customer services. Without the right solution, the possibilities for acquiring more IP addresses were either limited or too expensive from their past vendors.

A short-term fix for was plausible, but it might be inconvenient and could sacrifice future innovation. There had to be a smarter play.

Building a plan

In a perfect scenario, Perry would simply invest in new IPv6 technology, but the city didn't have the time nor budget for such an initiative, and would still need to support customers using legacy IPv4 clients for the foreseeable future. Spanish Fork needed to be on publicly routable IPvX addresses; they couldn't end up in a situation where there was an inability to deliver on their promises to customers.

Spanish Fork acted fast. The team built an agile technology strategy that would call for a carrier-grade networking (CGN) solution to manage their address translation challenges within budget and without limiting future growth.

SIP and go

Additionally, there was also a secondary issue that required resolution. Spanish Fork needed to prioritize network addresses translation (NAT) for their services based on the session initiation protocol (SIP).

SIP is a communications standard that facilitates and manages interactive multimedia sessions (e.g., VOIP, video calls, instant messaging, etc.). Deployed at the application layer, SIP leverages many of the same fundamentals found in HTTP and SMTP communications standards.

Spanish Fork would focus on SIP in the early phases while preparing the two-way bridge between IPv4 and IPv6.

'Would they Listen?'

You can picture it: a list littered with the world's leading networking and appliance vendors. They are big-name players with significant stake in the world's hyper-connected existence. Would they be agile enough to scale their solutions in a way that meets the unique needs of a progressive, city-owned service provider? Could they ensure the city would only pay for solutions and services that match its needs?

Perry and his team got to work. They began vetting each vendor: first on features, then on price, performance and responsiveness. Unsurprisingly to the team, they were all not a match or surpassed the city's budget by a factor of 10.

However, after a meeting with A10 Networks, the Spanish Fork strategy began to take shape. A10 was the only vendor that listened when Perry said the municipality was cost-sensitive. In fact, no one other than A10 was flexible, responsive and engaging.

"A10 was the only trusted vendor that truly listened to our needs," said Perry. "No one other than A10 was flexible, and being flexible in right-sizing was the determining factor. Everyone wanted to sell solutions bigger than what we needed — and at an inflated price."

The 'Right-size' Solution

The right-size approach — coupled with the exact feature set — turned out to be the differentiator. Spanish Fork and A10 quickly collaborated on a plan to solve four primary challenges via the A10 Thunder CGN solution:

- Implement smart NAT that meets SIP requirements for their customer-facing services
- Deploy CGN to expand IPv4 address range and translate private addresses for public routing
- Build reverse translation blueprint for both IPv4 and IPv6 standards
- Ensure the entire solution was highly available for sound business continuity

THE PLAN WORKED

A10 empowered Spanish Fork to extend the service life of their IPv4 infrastructure, affording them time to plan their IPv6 transition and ultimately reduced cost by avoiding disruptions to business operations

About Spanish Fork Community Network

Based in Utah, Spanish Fork Community Networks is a municipal services provider that delivers telephone, digital TV and Internet services to the growing community. The city-operated organization — which actually turns a profit and reinvests revenue into the community — offers services to a population of nearly 40,000 and is rolling out fiber connectivity to residents.

About A10 Thunder CGN

Scale to solve IPv4 exhaustion and meet the growing demands of IoT and BYOD business requirements. A10 Thunder CGN preserves your IPv4 addresses and provides a seamless migration to IPv6 networks with the lowest total cost of ownership (TCO).

The solution comes standard with integrated distributed denial-of-service (DDoS) protection of IP address pools to effectively eliminate targeted attacks and ensure maximum service uptime. With industry-leading performance and session scalability, A10 Thunder CGN gateways deliver unparalleled value to improve the bottom line.

To learn more about A10 Thunder CGN, please visit **a10networks.com/cgn**.

About A10 Networks

A10 Networks is a leader in application networking, providing a range of high-performance application networking solutions that help organizations ensure that their data center applications and networks remain highly available, accelerated and secure. Founded in 2004, A10 Networks is based in San Jose, California, and serves customers globally with offices worldwide. For more information, visit: **www.a10networks.com**.

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