

ASOM-Net Enables Business Growth By Preserving IP Addresses With A10 Thunder CGNAT

Whether Danes are catching up on the Bron/Broen crime thriller, engaged in an epic Counter-Strike battle, or doing homework after school, chances are that their internet traffic traveled over ASOM-Net's network. Located in Jutland, Denmark, and with more than 75,000 subscribers, ASOM-Net provides voice, television, and internet services to 23 housing associations.

A10 just works. CGNAT is a key component for our infrastructure, because there's no way we can get 30,000 more IP addresses.

—Kristian Pedersen
System Architect
ASOM-Net

ASOM NET

Industry | Service Provider



Network Solution
A10 Thunder® CGN



Critical Issues

- Growing demands for network address translation was impacting firewall performance and the subscriber experience



Results

- Enabled continued business growth by maximizing available IP addresses
- Perform IP address translation on 30 Gbps of traffic with no impact to the subscriber experience
- Set-and-forget operations

Challenges

In Denmark, affordable housing is owned by the government but managed through a non-profit association. The housing associations are run democratically by a council of tenants. Cable providers rely on ASOM-Net to provide the underlying network services to their subscribers. With ASOM-Net, cable network operators can leverage the company's network scale, technical skills, and collective bargaining power to offer customers competitive rates on TV, internet and phone. ASOM-Net also provides customer support and billing to the cable providers.

ASOM-Nets mission is to stay invisible. Its network must work, allowing cable providers to deliver their services to the residents of the housing co-op. ASOM-Net is a co-op itself, owned by the cable providers. When the company was launched in 2005, one of the biggest challenges was a small block of public IP addresses, with little chance of being granted any more as the number of customers and devices grew.

The engineering team at ASOM-Net started out with a design directive for IP address efficiency. ASOM-Net needed large-scale network address translation to make the most of the 40,000 public IP addresses it owned.

In the beginning, the firewalls also handled the task of network address translation, but as subscribers streamed more video, played more games, and spent more time on the internet, the firewalls could no longer do double-duty. The demands of network address translation began impacting overall throughput.

"We needed a lot more performance," says Kristian Pedersen, system architect at ASOM-Net. The company has seen a tenfold increase in bandwidth and subscribers have grown by 5X over the last four years. It needed a solution that could keep pace with 30 Gbps of traffic.

Selection Criteria

The engineering team decided to look for a carrier-grade network address translation (CGNAT) solution. "We wanted CGNAT as a dedicated solution that is really good at what it does, instead of mixing a lot of functions on the same network device," says Pedersen.

"Based on what the A10s were doing, it didn't make sense to keep them—until we did discovery," says Singh. It turned out that the application team was using multiple open-source load balancing tools for their own needs. "They didn't have the bandwidth to configure all the different load balancers, and they didn't want to," he says.

"Based on our load balancing need, coupled with the CGNAT requirement, as well as my previous experience, A10 seemed like the perfect solution to keep," says Singh.



The A10 Solution

The team found A10 Thunder® CGN through an internet search, did its due diligence, and determined Thunder CGN was the best fit. Thunder CGN provides high-performance, highly transparent network address and protocol translation, enabling ASOM-Net to serve its growing subscriber base without exhausting its available IPv4 addresses. Offloading the NAT job also enabled the company to extend the life of its security infrastructure.

"A10 just works," says Pedersen. "CGNAT is a key component for our infrastructure, because there's no way we can get 30,000 more IP addresses."



Results

Thunder CGN enhances the security and availability of ASOM-Net's infrastructure. As an ISP, ASOM-Net is often the target of DDoS attacks. "It's typically a 20 Gbps attack that lasts ten minutes," he says. "It's very easy to see a DDoS attack happening on the Thunder CGN units so we can mitigate the attack internally."

Continuing, ASOM-Net is implementing the NAT IP pool protection capability. Thunder CGN can temporarily disable the IP address under attack from the pool and reassign other members of the pool to a different IP address, so subscribers won't be impacted by the attack.

"NAT operations have been seamless and scalable. Thunder CGN appliances have been running reliably for several years, and operations have been simple. "From an operational standpoint, we tend to forget about the Thunder CGNAT systems because they are so stable," says Pedersen.

Configuration changes are also straightforward, too. "Thunder CGNAT is quite easy to use," says Pedersen. "We use a mix of the command line interface and the graphical user interface, and both are intuitive. The team also automated the backup of configurations using open-source scripting tools. "With automatic configuration revisioning, we can see exactly when a parameter was changed if we need to investigate."



Success And Next Steps

The engineering team ASOM-Net has maintained a strong working relationship with A10 over the years.

"There is a dedicated team behind the product, so we never feel alone. A10 gives us good guidance about which products and features would be useful to us."

When asked for advice for other system architects that need to preserve their IP addresses," Pedersen said, "The easy answer is to select A10 because it just works."



About ASOM-Net

ASOM-Net is a nonprofit community for free antenna and housing associations. We work to give members great administrative, technical, and economic benefits with the provision of television, internet, and telephony. The result is a large circle of stronger and more competitive free antenna associations and more than 75,000 happy members—and we also have room for you.

We have extensive experience in reliable and stable delivery from our main station and the associated infrastructure. Our talented and committed employees handle both the operation and support of your customers with a very high level of service and professionalism that fully matches the big players in the market.



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About A10 Networks

A10 Networks (NYSE: ATEN) provides secure application services for on-premises, multi-cloud and edge-cloud environments at hyperscale. Our mission is to enable service providers and enterprises to deliver business-critical applications that are secure, available and efficient for multi-cloud transformation and 5G readiness. We deliver better business outcomes that support investment protection, new business models and help future-proof infrastructures, empowering our customers to provide the most secure and available digital experience. Founded in 2004, A10 Networks is based in San Jose, Calif. and serves customers globally.

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