

## G-Core Labs selects Arista to power next generation of high-performance content distribution network services with reduced cost while offering capacity for growth.

### Highlights

#### Challenge

With the rapid growth of its content distribution service, G-Core Labs was starting to reach the price versus performance limits of its legacy network technology and looked to Arista as a path towards cost savings and sustained growth.

#### Solutions

- Arista 7280 Series Switches
- Arista 7050 & 7010 Series Switches
- Arista EOS®

#### Results

- Cost-effective migration to 100GE core network
- Major increase in port density with decrease in maintenance and support costs
- Planned migration away from MPLS to reduce additional WAN costs
- Fast and responsive technical support with a credible long-term product roadmap

G-Core Labs have been recognised as a pioneer in delivering high-performance content distribution networks at a price point that is one of the lowest within the industry. With increased demand and planned regional growth, G-Core Labs turned to Arista Networks technology for a major migration and upgrade project that delivered significant capital and operational cost savings while providing a viable route to meet its expansion plans.



### Project Background

Having a team of highly skilled professionals with many years of experience in IT, including game development, G-Core Labs revels in pushing the envelope in terms of performance and scale when it comes to content distribution networks (CDNs).

Since 2011, the company has grown rapidly establishing point-of-presence locations across 5 continents. In 2013, the firm was awarded the world record by the Guinness Book of Records for the “Most Players Online Simultaneously on one MOG Server”. A record they then beat, in 2014, when the G-Core network served up 1,114,000 online gamers simultaneously.

### Challenge

As Jens Osterloh, Network Architect for G-Core Labs explains, “performance, reliability and price – that is the focus for everybody in the CDN industry which means we are constantly looking at ways to improve any or all of these criteria if we hope to keep growing and winning new customers.”

With increased demand from new territories and a great deal of interest from the gaming industry, G-Core Labs began another round of business engineering in 2014.

“We were faced with increasing bandwidth requirements, to multiple 10GE and to 100GE per ISP and in the backbone,” explains Jens, “Not only did we need to expand and increase capacity, but at the same time we also needed to reduce the price per port and the total costs per location.”

The equipment we used previously did not provide the performance we aimed at and it was not cost-efficient. “The equipment from our previous supplier was simply too expensive for where we needed to go,” says Jens Osterloh.

### Solution

Following an extensive evaluation of competitive options, Jens Osterloh and his technical team decided on an upgrade that would move key locations and all new deployments onto Arista Networks switches. “Arista provided the best platforms with the lowest total cost of ownership,” says Jens, “Platforms like the 7280 made all new and upgraded locations 100GE ready, and with the 40GE port in breakout configuration, we were able to deliver 10GE ports at an extremely competitive price point.”

In the smaller deployments, G-Core Labs was able to use a pair of Arista 7280 switches to replace at least 4 legacy switch devices, including high-end routers.

In terms of deployment, the move to Arista has prompted a change in architecture which is offering additional advantages. “We use the Arista 7820 platform for internet edge, CDN aggregation, 10GE and 100GE WAN backbone and as datacentre core switches,” explains Jens, “We also use a top-of-rack Arista 7050 to provide us with 10GE SFP or RJ45 in the racks. Occasionally we use Arista 7010 for 1GE, if required, and for management purposes.”



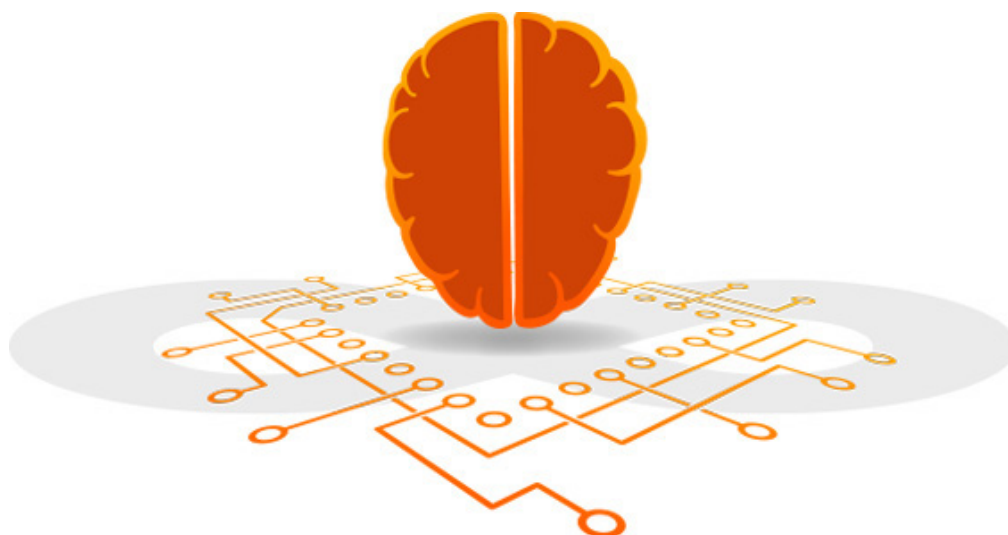
The move has allowed G-Core Labs to increase overall capacity but also simplify its network. “We were able to change our standard datacentre design to (almost) 10GE only, which increases capacity and reduces network costs per server,” says Jens. “On the Internet edge, we were able to upgrade from multiple-10GE to 100GE, which reduces costs for cross-connects and provides us with a big reserve of bandwidth capacity for future growth.”

With a next generation of online games boasting potentially hundreds of thousands of simultaneous players, this room to grow is “...extremely important for the high-bandwidth CDN and streaming business and especially beneficial for our new video platform,” adds Mr. Osterloh.

With 44 global locations and growth on almost a monthly basis, the upgrade to Arista is still ongoing. “We are going to upgrade all remaining locations to Arista-only,” says Jens, “We are also considering the use of newer features like EVPN for global connectivity which will allow us to replace our current MPLS implementation.”

Within the original criteria of performance, reliability and price, Jens believes the upgrade has achieved its goal. “With Arista, we have gained significant improvements in CapEx and OpEx through lower service and maintenance costs while reliability has been faultless!”

Alongside the hardware cost and performance benefits, Jens Osterloh also flags up positives in dealing with the Arista support teams. “In the past It could have taken more than one year to solve a major software bug,” says Jens, “I still remember the case where we were affected by the software bug related to the BGP process and spent almost 8 months before the vendor could shine a light on a root cause. Arista are different – they do things very fast and professionally and they are ready to go the extra mile for customer satisfaction.”



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