Customer Case Study

Magnum Semiconductor

A hybrid network that economically moves large data sets between design centers while maintaining QoS and predictable performance for other business critical applications

Magnum Semiconductor:

Magnum Semiconductor is a leading provider of chips, software, and platforms for consumer entertainment systems and the professional broadcast infrastructure.

Challenge:

With global operations that leverage research and development teams around the world Magnum found that MPLS, while stable, was simply too expensive for all of their traffic. WAN Optimization wasn't viable because much of the traffic was highly compressed video files.

Adding connectivity over the Internet boosted bandwidth; but delivering consistent application performance over parallel networks, of low bandwidth MPLS and unreliable IPSec VPNs, was difficult to manage.

Solution:

Install Talari T700 APN appliances at four design centers and use them to aggregate Internet and MPLS bandwidth. Let the APN Appliance manage quality of service end-to-end between the sites removing the need to schedule large design and test database transfers.

Results:

With APN in place Magnum is able to maximize use of the available bandwidth between sites seamlessly. Loss mitigation ensures that data replication times are minimized, and end-to-end QoS prevents data replication from interfering with other applications such as VoIP. Magnum was able to avoid an MPLS upgrade, which will save them over $100,000 per year.

Magnum Semiconductor, based in Milpitas, California with sales and engineering offices in Canada, China, India, Japan, Korea, and Taiwan, is a leading global provider of chips, software, and platforms for consumer entertainment systems and the professional broadcast infrastructure. Magnum provides the tools and technologies for recording, storing, managing, viewing, and exchanging audio and video throughout the home, and on the go. They are the world leader in video compression technology and offer processing solutions spanning video distribution end-to-end, from broadcast servers to living room clients and home media servers -- enabling Any Content... Anywhere.

Product development engineers in Canada, China and the USA depend on the sharing and transferring of large video stream files as they do around the clock product troubleshooting and testing. These files are already massively compressed yet still average 20GB in size.

To help with stability and sharing they installed a MPLS network and implemented mirrored stream servers. However, data in each server changed frequently and the large file transfers would often bring the network down.

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Adding more bandwidth on MPLS to alleviate these issues was prohibitively expensive and Internet connections were unreliable, especially over the ocean with China. They implemented a work around that would not impact network performance but required 7 days notice for any large file transfers.

It was critical engineers have an agile development process with the ability to transfer large files back and forth. "We researched multiple network accelerator and optimization alternatives. These solutions only seemed to help with application delivery and did not offer what we needed for large file transfers, file mirroring, syncing and backups," says John Wunder, Director of IT for Magnum Semiconductor. It was essential they find a solution that supported this distributed development model.

Talari Solution

To solve their problem, Magnum installed Mercury APN Appliances at each of their design sites and used them to aggregate multiple Internet connections and the existing MPLS.

Moving large files back and forth extensively to create a 24 x 7 agile development environment needed a lot of consistent, stable bandwidth. "I needed something that was going to aggregate all of my investments and reduce my costs", says Wunder.

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Another benefit of APN is the built-in Quality-of-Service (QoS). Like many companies, Magnum's VoIP network is deployed for cost effective site-to-site communication, however, they did not have the resources to build out and manage a QoS enabled network. Wunder says, "By deploying APN I got QoS for free and didn't need to build out any extra infrastructure. In addition, aggregating MPLS with my primary Internet links has long term cost savings. The additional ports of the T700 will allow me to add lower cost primary links in the future."

Results

Deploying APN has greatly simplified network operations and avoided the need to purchase additional expensive MPLS bandwidth. Instead of managing a mix of Internet and MPLS connections between sites, they logically have high bandwidth APN conduits that have integrated QoS and hide network impairments such as loss, latency and jitter.

"The real time traffic engineering that APN performs on a packet by packet basis means that the network is always performing optimally," Wunder commented. "We don't need to worry about reconfiguring the network to protect other applications when we have a large data set to move between sites."

Installing APN avoided an MPLS bandwidth upgrade that would have cost over $100,000 per year and the increase in network reliability is estimated to have already saved approximately $50,000 in potential opportunity loss due to production downtime.

About Talari Networks™

Adaptive Private Networking does for the Enterprise WAN what RAID did for storage. Talari's *Mercury* line of Adaptive Private Networking appliances delivers a network with 30 to 100 times the bits per dollar, ongoing WAN costs reduced by 40% to 90%, and greater reliability than existing corporate WANs, transforming virtualized-WANs to bring Moore's Law and Internet economics to Enterprise WAN buyers, outsourcers and MSPs.

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