



customer profile



C2C IMPROVES SATELLITE BANDWIDTH UTILIZATION WITH SILVER PEAK

Virtual WAN Optimization Allows Telecommunications Provider to Cost-Effectively Deliver Voice, Video and Data Services to Military Personnel Abroad

C2C, a Globecomm company, is specialized in Satellite communication solutions, and owns and operates a Teleport in Biddinghuizen, The Netherlands. C2C serves customers globally, connecting them worldwide via turnkey satellite solutions. C2C ensures that no matter how remote the location, companies have excellent quality of data, voice and internet connectivity. Customers contract with C2C because individual attention is given to each and every service C2C runs on a 24/7/365 basis. C2C's customer base include companies in the oil, gas and mining industry, shipping companies, blue chip corporations, telecommunication solution providers, government organizations and telecom operators.

Globecomm Systems Inc. is a leading global provider of satellite-based managed network solutions. Employing Globecomm's expertise in emerging communication technologies, they are able to offer a comprehensive suite of system integration, system products, and network services enabling a complete end-to-end solution for their customers.

C2C provides telecommunication services to various armed forces in Afghanistan. With several remote compounds supporting hundreds of military personnel, wide area network (WAN) connectivity is extremely important as it allows the troops to connect with their families and friends back home, and keeps them in touch with activities and news around the world. The telecommunication services C2C provides as part of the Welfare service includes telephony, Internet, radio, and TV. Each of the troops have a pre-paid subscription with a self-service capability that allows them to select the level of quality, and type of service they require.

THE CHALLENGES

C2C was experiencing challenges managing IP data (TCP and UDP) going over bandwidth-limited and relatively-expensive satellite links. A challenge they faced was transmission delay, common to all satellite networks, that limits TCP throughput over satellite.

C2C needed a solution that would improve satellite link utilization and address data transport limitations. It became essential for them to improve bandwidth efficiencies so they could more fully-utilize their satellite links to handle more traffic and better support their existing traffic loads. The majority of the traffic was HTTP, but other applications included, email (POP3 and SMTP), streaming audio, Internet TV, VoIP, and FTP file transfers.

THE SILVER PEAK SOLUTION

A Silver Peak VX-3000 virtual WAN optimizer was deployed at C2C's central data center, and Silver Peak VX-2000 virtual appliances were deployed at each of the remote compounds. The Silver Peak VX virtual appliances reduced packet loss and significantly improved the reliability of the satellite connection using Silver Peak's real-time Forward Error Correction (FEC) capabilities, TCP acceleration, and Network Memory capabilities with advanced de-duplication and compression. QoS, traffic shaping and optimization technologies manage application level and subscriber level traffic (e.g. voice gets priority over email, etc.).

All Silver Peak WAN optimizers were deployed as virtual appliances on VMware hypervisors running on HP DL380 servers.

Customer: CARRIER2CARRIER



Business Challenges

- Satellite WANs with bandwidth-limitations
- Growing TCP and non-TCP traffic
- Remote deployments in Afghanistan
- Subscription-based virtual WANop required

Network Background

- IP-based satellite WAN
- TCP and non-TCP traffic
- HTTP, FTP, SMTP, POP3, streaming audio, VoIP
- VMware on HP DL380 servers

Silver Peak Results

- More than 50% bandwidth reduction
- Packet loss nearly eliminated
- More applications running over existing WAN
- Facility costs reduced by 200%

THE BENEFITS

With the Silver Peak WAN optimizers deployed, C2C was able to achieve bandwidth reductions of greater than 50%. In addition, latency has been overcome, and packet loss is now less than 1%. This has resulted in significant improvements in application response times - particularly with HTTP web traffic. C2C is now able to run more applications and service more users with the same amount of satellite bandwidth they had before deploying the Silver Peak WAN optimizers.

“Our criteria for choosing a WAN optimization solution was very specific—we needed a high capacity solution that could solve network quality and latency issues for a wide range of traffic,” states Kees Jan Mink, general manager at C2C. “Silver Peak had a clear advantage on these fronts.”

Mink added, “Silver Peak also gives us a level of flexibility not offered by other WAN optimization solutions. Their wide array of virtual appliances with subscription pricing fits perfectly into our service provider model.”

By deploying Silver Peak’s virtual appliances on VMware, C2C’s server and facility costs have been reduced by 200%.

SUMMARY

C2C chose Silver Peak’s virtual WAN optimizers to improve satellite communications for the Welfare service of the military. Their objectives to significantly improve response times and support more traffic over their existing satellite network were achieved. By choosing this solution from Silver Peak, it enabled C2C to provide customers with significantly greater bandwidth utilization, improved WAN performance and greater network reliability by optimizing bandwidth and alleviating issues that limit TCP throughput over satellite. In addition, the flexibility provided by Silver Peak’s virtual solution made the company a natural fit for C2C’s service delivery model.



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