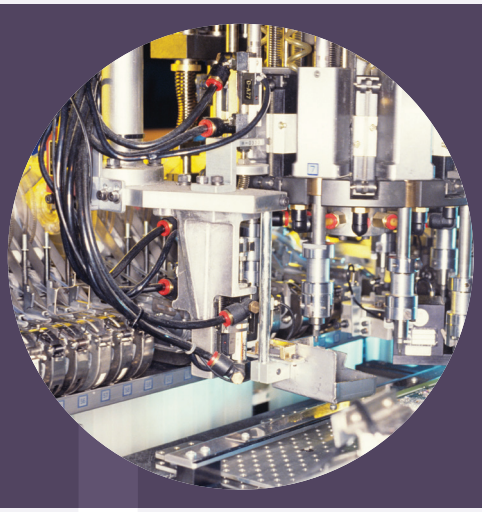
Silver Peak | customer profile

SMTC FUTURE PROOFS ITS NETWORK WITH SILVER PEAK WAN ACCELERATION

Electronics Manufacturer Accelerates Data Mobility by over 20x between China, Mexico, Canada and the U.S.



Server consolidation reduces costs, but it also introduces network challenges that left unaddressed can undermine business processes. Just ask SMTC, a global electronics manufacturing services provider. The company had successfully consolidated servers into its Markham, Ontario data center, but as the company's WAN become more congested, essential business applications – ERP, CRM, and more – became unusable.

More bandwidth would have been too expensive and ultimately ineffective as data volumes continued to grow, so SMTC turned to WAN optimization and Silver Peak for its global network. "Silver Peak is affordable and provides more bang-for-the -buck than any other product on the market," says John Ouzounis, SMTC's IT director.

"With Silver Peak, we've seen transfer ratios as dramatic as 20-to-one," he says, "Bandwidth issues meant some file transfers would take as long as 60 minutes to download. With Silver Peak, those same transfers are now down to just five minutes."

CRIPPLING FILE TRANSFERS

SMTC is a recognized global electronics manufacturing services provider with more than 2,500 employees worldwide. Company operations depend on several centralized applications delivered from SMTC's Ontario data center - including enterprise resource planning (ERP), Windows-based file transfers, Lotus Notes, and remote desktop (RDP) connections - to six offices in mainland China, Hong Kong, Mexico, the U.S., and Canada.

However, increasing data volumes and a congested multiprotocol label switching (MPLS) WAN impeded the company's long-distance operations. Problems were particularly pronounced in the Mexico facility, where connections regularly dropped. Large (20 Megabyte) files took up to an hour to transfer when they should have taken no more than a few minutes. Users found their RDP thin-clients to be impossible to use, and Web traffic often slowed to a crawl with frequent timeouts. (see figure 1)

QUALITY FIRST

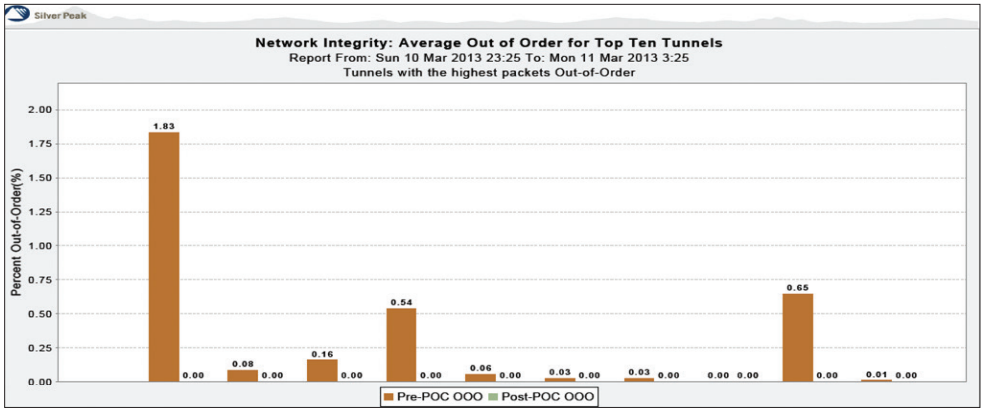


Figure 1: Silver Peak eliminated out-of-order packets from SMTC's network

Customer: SMTC

Business Challenges

- Enable employees to continue using corporate applications.
- Shorten the time needed to share files and information

Network Background

- Data center in Markham, Ontario with six offices in mainland Canada, China, Hong Kong, Mexico, and the U.S.
- All sites connected via an MPLS network.
- Centralized applications include enterprise resource planning (ERP), Windows-based file transfers, Lotus Notes, and remote desktop (RDP) connections.

Silver Peak Results

- Throughput on a 2 Mbps line to Mexico office increased 12x from 2 Mbps to 24 Mbps.
- Time to transfer 20 megabyte files reduced from 60 minutes to five minutes.
- HTTP traffic declined by 86 percent.
- SMTP traffic fell by 74 percent.
- CIFS traffic was reduced by 58 percent.
- Lotus Notes traffic fell by 67 percent.

Adding bandwidth would have been too cost prohibitive and still would not have addressed the problem so SMTC turned to WAN optimization. AMA, an authorized Silver Peak partner in Canada, introduced SMTC to Silver Peak, the leader in accelerating data over distance. Silver Peak Virtual Acceleration Open Architecture (VXOA) software, uses real-time acceleration techniques to overcome the adverse effects of latency, congestion, and limited network capacity—all of which were significantly impairing long-distance data transfers and application performance for SMTC.

NETWORK QUALITY IS KEY

With Silver Peak deployed, SMTC was able to achieve 12-times more throughput on its 2 megabits per second (Mbps) circuit between Mexico and Ontario. Part of the reason for that improvement was the incredible increase in network quality enabled by Silver Peak's software. Out-of-order packets and packet loss force the network to retransmit packets. As a result, throughput declines and applications sensitive to delays, such as RDP, suffer. Mouse movements are no longer fluid. Screens take longer to refresh and thin-client applications becomes unusable.

Silver Peak software corrects packet loss and out-of-order packets in real time. Packet-level Adaptive Forward Error Correction (FEC) reconstitutes lost packets at the far end of a WAN link, avoiding delays that come with multiple round-trip retransmissions. Silver Peak software also uses real-time Packet Order Correction (POC) to resequence packets across all IP flows on the far end of a WAN link to avoid retransmissions that occur when packets arrive out-of-order. SMTC saw out-of-order packets drop from 2.6 percent down to just .3 percent, a 99 percent decline, while packet loss held constant at .01 percent (See Figure 2).

BANDWIDTH SAVER

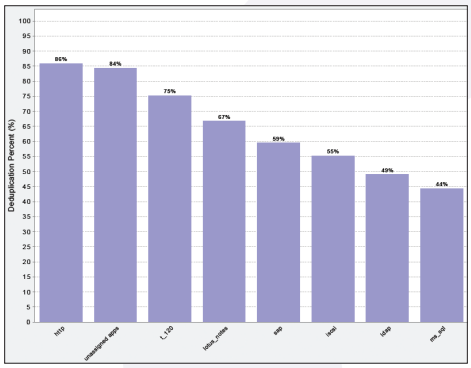


Figure 2: SMTC reduced the data transferred across its WAN for many applications.

For SMTC, improving network quality made all the difference in the world. "User sessions would time out and fail," noted Stephen Dunscombe, SMTC's network administrator. "That just doesn't happen anymore."

In addition, Silver Peak dramatically improved file transfer performance by maximizing bandwidth, shaping traffic and dissolving distance. Silver Peak's deduplication algorithms eliminate repetitive byte-level patterns across any application sharing the WAN, minimizing the amount of actual data SMTC had to pass between offices. Sophisticated Quality of Service (QoS) enabled SMTC to guarantee that large file transfers would not impact the other applications on the network and Silver Peak's CIFS and TCP acceleration techniques dissolved the distance between SMTC's sites.

The result – WAN throughput reached 24 Mbps on a 2 Mbps line. CIFS, used for accessing files, dropped by 58 percent and Lotus Notes traffic fell by 67 percent. But that was nothing compared to SMTP traffic that fell by 74 percent or HTTP traffic, which declined by 86 percent (See Figure 2).

With Silver Peak deployed, SMTC was able to achieve 12-times more throughput on its 2 megabits per second (Mbps) circuit between Mexico and Ontario

MORE THAN JUST PEFORMANCE

But as impressive as Silver Peak's performance, other factors were equally important in SMTC's decision to deploy Silver Peak globally. Silver Peak makes testing and deploying WAN optimization easy. The software can be downloaded for a free trial any time of day from Silver Peak's Virtual Marketplace. "Silver Peak offered a free trial so I could determine actual performance and usage, which was extremely important," says Ouzounis.

As for virtual software, Silver Peak is a fraction of the cost of hardware solutions and far easier to deploy without sacrificing on performance. "It is affordable and provides more bang-for-the -buck than any other product on the market," he adds. AMA's Ted Davis agrees. "Cost and performance were definitely key considerations," he says, "Competitive offerings can be 30 percent to 40 percent more expensive and not come close to the performance levels of Silver Peak's software-based approach."

Improving performance, though, isn't just about today's users. "Silver Peak is helping us 'future proof' our business with scalability and performance headroom for addressing our data growth," says Ouzounis.

As SMTC needs faster performance, Ouzounis and his team will be able to upgrade Silver Peak software simply by downloading a software key from the Virtual Marketplace. There are no hardware refreshes to get caught up in. No messy installations or worrying that the network will somehow constrain the organization.

Ouzonius, like thousands of other Silver Peak customers, has addressed today network challenge while preparing for the future. For more information on how Silver Peak can help you future proof your network, contact your local Silver Peak representative or visit our website at www.silver-peak.com.

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