



GLOBAL IT CONSULTING FIRM STAYS IN SYNCH WITH CLIENT REPLICATION DEMANDS

BACKGROUND

In the world of IT outsourcing, protecting client data is priority one. This includes protection against unexpected outages, as well as protection from unauthorized access.

“We were only getting around 2–3 Mbps throughput per replication stream. It became clear that WAN acceleration was required for us to meet and exceed the service agreements we had in place with our clients.”

— NETWORK MANAGER, CAPGEMINI

CAPGEMINI CHALLENGES

- » Limited throughput on Gbps private WAN link
- » Oracle replication not completing within 60-minute windows
- » MirrorView replication required dedicated 45-Mbps WAN connection
- » Stringent security requirements to protect client data

SILVER PEAKS RESULTS

- » Oracle replication reduced from 75 minutes to <1 minute
- » 25% improvement in MirrorView performance across the WAN
- » 75% data reduction across the WAN
- » \$12,000 per month in WAN bandwidth savings
- » Identified and corrected carrier's problem with out-of-order packets

As one of the world's foremost providers of consulting, technology, and outsourcing services, Capgemini takes data protection seriously. In fact, the firm implemented a Gigabit per second (Gbps) private WAN link between Arizona and Massachusetts for the primary purpose of handling client replication traffic, a cornerstone of the company's stringent business continuity objectives.

Despite having plenty of bandwidth between these data centers, Capgemini's WAN remained an obstacle to their data protection goals. Latency, high TCP flow counts, and packet reordering on this private link all contributed to a less than stellar replication experience between hosting facilities.

This also prevented the firm from consolidating the traffic from other WAN links into this connection, which would save the company tens of thousands of dollars a month in bandwidth expenditures.

“We simply couldn't fill our gigabit pipe,” said one of the network managers at Capgemini. “At most, we were only getting around 2–3 Mbps throughput per replication stream. It became clear that WAN acceleration was required for us to meet and exceed the service agreements we had in place with our clients.”



SCOPING THE PROJECT

Capgemini routinely transfers a minimum of 600 GB of data across the WAN per day using a variety of replication tools, including Oracle Log ships and EMC MirrorView. In addition, their WAN is used for SAP, file transfers, email, and Voice over IP (VoIP), making it a critical lifeline to business productivity.

“Our Oracle replication needs alone justified an investment in WAN optimization,” said the network manager. “We create 650-MB logs that need to be replicated every 60 minutes. It was taking us 75 minutes to transfer these logs across the WAN, which led to a host of database synchronization problems and subsequent troubleshooting headaches.”

The company evaluated products from four leading WAN optimization vendors to determine which could best meet their replication requirements. In the end, they chose to deploy Silver Peak’s NX Series appliances.

Silver Peak NX Series appliances come equipped with Network Memory™, a disk-based data reduction technology that significantly reduces the amount of data crossing the WAN by delivering duplicate information from local data stores. Silver Peak provides additional optimization techniques

that overcome high latency, packet loss, and out-of-order packets across the WAN, making it a perfect fit for the Capgemini environment. All data stored on the Silver Peak appliances and transferred between appliances is protected using AES encryption.

“Silver Peak is the only vendor we evaluated that offers full encryption at line-rate speeds,” said the network manager. “This is imperative for us because we handle credit card information, Social Security numbers, and other sensitive client data. We were pleased to find that we could pump as much secure data as we wanted through the Silver Peak boxes, without impacting scalability or performance.”

PROCESS IMPROVEMENT

With WAN optimization in place, Capgemini saw Oracle log transfers reduced from 75 minutes to less than 1 minute. At the same time, there was a 12x improvement in WAN throughput for these streams, and a 75% reduction in overall WAN traffic.

With the Gbps WAN link reaching its full potential, Capgemini was able to decommission a dedicated 45-Mbps link used for Mirrorview replication and consolidate this traffic onto a single WAN link. This enabled the firm to save approximately \$12,000 per month in WAN bandwidth expenditures. At the same time, a 25% increase in MirrorView performance was seen across the accelerated WAN.

Capgemini also received nice dividends from the reporting capabilities within the Silver Peak solution. Upon installment of Silver Peak’s Global Management System (GMS), the firm detected a major problem with out-of-order packets in their carrier network, which was contributing to the firm’s WAN performance problems. With Silver Peak’s reports in hand, Capgemini confronted its service provider and forced it to completely re-engineer their WAN link.

Today, Capgemini is sending more data across the WAN, faster than ever before. This has saved the company time and money, while ensuring that clients get the best possible service.

“When you are in the business of data protection, you are always looking for ways to improve RPO and RTO”, said the network manager. “With Silver Peak, we have found a cost-effective way of achieving just that. This has made WAN acceleration a strategic component of our IT hosting services.” ■