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Chip designer selects Silver Peak for WAN acceleration

Toshiba America Electronic Components Inc. turned to Silver Peak Systems Inc. wide area network (WAN) optimization appliances when it needed help moving large engineering files coast to coast for disaster recovery, choosing the startup over larger and better known competitors.

Toshiba America's director of information systems, Leon Roberge, said Silver Peak's NX WAN acceleration devices outperformed Riverbed Technology Inc. in his evaluation, which surprised him considering Riverbed's reputation.

Roberge manages about 85 TB of storage, mostly on Network Appliance Inc. (NetApp) systems. He uses NetApp's SnapVault to replicate his engineering data across the WAN over T1 and T3 links between design centers in Marlborough, Mass., and San Jose, Calif. But he was having trouble meeting his one-hour replication target due to packet loss and increasing volume. Toshiba America also has design centers and business offices in six other locations throughout the U.S.

"We do all of our disaster recovery coast to coast," Roberge said. "Fat pipes and long distances don't work well when it comes to filling the pipes. We're trying to get more data efficiently through the pipes through compression, as well as enhancing the core infrastructure, and we wanted a performance boost on that, as well."

Trying to keep within the one-hour goal was a losing proposition without any WAN optimization, Roberge said.

"We wanted to evaluate products that would allow us to achieve our run-time objective of one hour," he said. "We keep data active within one hour of our current file with SnapVault. Sometimes we would have to drop back to tape during our initial replication. If we had a lot of changes, it would take a lot longer. It could be off by as much as a couple of days if there was a bulk transfer."

Toshiba America also considered WAN optimization devices from Juniper Networks Inc. and Riverbed, and brought Riverbed and Silver Peak in for a side-by-side evaluation. Although Riverbed is the market leader, Roberge said he found Silver Peak better for handling T3 connections, which pose a challenge because of their significantly higher transmission rates.

"Riverbed is more of a factor in the T1 market space or lower network path, but it didn't seem like it was into the high-end and high-bandwidth market space as much when we were doing the evaluation," Roberge said. "The No. 1 factor was performance in our environment. We also looked at ROI. We wanted to achieve the data flow we needed between sites. We were looking

for something that could give us the highest bandwidth without impacting performance, something that had the ability to work in a live production environment coast to coast."

He said Riverbed's Steelhead appliances did an adequate job, but Silver Peak clearly won the performance test. "What it really came down to was the proof was in the pudding," Roberge said. "We put them side by side and one performed above the other."

Riverbed has since added disaster recovery capabilities aimed at optimizing performance when users try to send a larger amount of data over the WAN.

Toshiba America implemented NX-5500 WAN acceleration appliances in six of its large sites and NX-3500 appliances in two smaller sites last August. Roberge said he now meets run-time objectives and he expects a 14-month ROI based on a reduction of bandwidth and WAN traffic. "My SnapVault status is 26 minutes right now, coast to coast," Roberge said. "I get a 5x compression ratio and a 25% reduction in overhead due to compression. We're decreasing the bytes going across the pipes in a big way."

According to Jeff Aaron, Silver Peak director of product marketing, the reason his company handles larger bandwidth connections better is because of its Packet Order Correction. This feature resequences packets at the end of the WAN link, which avoids having to transmit them again if they arrive out of order. Silver Peak's compression data is at the network layer instead of at the TCP layer, which is where other WAN acceleration appliances do the compression.

Until recently, Roberge said his only complaint about the Silver Peak product was a lack of reporting but that was because he couldn't find it. "I asked for more reporting, but was told it was there," he said. "It's pretty slick."

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