VIKING LINE CRUISES TO BETTER BUSINESS PERFORMANCE WITH SILVER PEAK

WAN Acceleration Enables Popular Cruise Line to Operate More Efficiently and Effectively.

Ferries may be convenient and relaxing for passengers, but for IT professionals they present unique challenges. The lack of IT personnel on the ship and the limited bandwidth at sea means wide area network (WAN) problems cannot be easily rectified by simply "upping the bandwidth." So when Viking Line engineers saw their ship-based point-of-sale and business systems slow-down, and operational delays and customer complaints mount, they knew they needed a different kind of approach.

Silver Peak and its partner, Decens, were turned to for assistance. Silver Peak's WAN acceleration software optimizes any enter-prise application used by a cruise operator out-of-the-box. Viking Line deployed Silver Peak WAN acceleration on its ferries and at the data center. Not only did Silver Peak outperform the competition, eliminating on average 40 percent of Viking Line's trans-ferred data from the WAN (See Figure 1), but deployment was fast and the price was right:

"We were contacted by other WAN optimi-zation vendors before we chose Silver Peak," says Kaj Sundström, manager of network and communication, at Viking Line. "But during our testing Silver Peak proved to be the fastest, easiest and least expensive solution to deploy." he says.

SHIPS AHOY

Viking Line is a market-leader in passenger traffic on the northern Baltic Sea, transport-ing over six million passengers a year. Each ferry offers passengers a range of recreation-al services including on-ship shopping and free Internet access, both of which data con-nectivity limitations threatened to capsize.

Data connectivity on a cruise ship is different than conventional offices. When docked, the ship is in proximity to the terminal building, providing low-cost connectivity over a more than 100 Mbps Wi-Fi connection. Where possible, traffic is directed over this Wi-Fi connection, but as the ship leaves the harbor, Wi-Fi is lost leaving 3G/4G access until about six kilometers out at sea. After six kilome-ters, satellite connectivity remains with its high delays and just 3 Mbps download and 640 Kbps upload (See Figure 2).

Whether docked or at sea, connection prob-lems were becoming business problems for Viking Line. The limited satellite bandwidth meant the free Internet access was very slow, causing customer complaints. Point-of-sale and the back-office applications also slowed to a crawl "Online authorization for credit cards took so long customers would give up, and leave the store," says Sundström. Even when docked, the Wi-Fi connections proved insufficient. "Ships were delayed leaving the

Customer: VIKING LINE

Business Challenges

- Shorten time to transmit manifests to authorities.
- Improve sales at the ship's stores.
- Increase overall customer satisfaction.

Network Background

- Improve throughput of wireless connections and the performance of all operational systems.
- Long delays led to time outs, causing missed credit card authorizations.
- Ferries had three connections – 3G/4G, Wi-Fi, and satellite.

Silver Peak Results

- Eliminated 40 percent of the traffic from wireless connections
- Deduplication bursts of over 95 percent (HTTP) and 90 percent (CIFS) were seen.
- Improved customer satisfaction and store sales
- Greater business efficiency due to shortened time to release ships from harbor.

Top 10 Flows (All Traffic- LAN Rx - Last 15min) » Total Flows: 462									
IP1	Port1	IP2	Port2	App	Protocol	LAN Rx Bytes	WAN Tx Bytes	Reduction (%)	Up Time
	53325		445	cifs_smb	cifs [server]	219,484,282	18,413,329	91.6	3h 1m 40s
	54443		445	cifs_smb	cifs [server]	61,196,827	14,698,454	76.0	3h 0m 6s
	60500		445	cifs_smb	cifs [server]	8,917,476	3,249,886	63.6	48m 4s
	58671		1126	ms_exchange	tcp [accel]	6,310,066	6,831,901	0	3h 2m 13s
	56413		1126	ms_exchange	tcp [accel]	2,205,439	2,240,577	0	3h 2m 8s
	58673		1126	ms_exchange	tcp [accel]	1,632,971	1,649,599	0	12m 59s
	51280		1126	ms_exchange	tcp [accel]	701,657	713,289	0	3h 2m 1s
	53402		1126	ms_exchange	tcp [accel]	695,232	705,838	0	2h 30m 58s
	55943		80	http	tcp [accel]	517,683	17,071	96.7	1m 41s

Figure 1: Viking Line eliminated at times more than 90 percent of its CIFS and HTTP data.

harbor because it took us so long to send the required manifests to the authorities."

THE SOLUTION: SILVER PEAK

Viking Line engineers turned to WAN optimization. The 3G/4G connections are rate-based so data deduplication performance was critical. Less immediate, but on the horizon, was being able to identify select the optimum path from various connections at any one-time.

Other WAN optimization vendors were discounted for performance and complexity reasons. "Not only did Silver Peak outperform them, but the Siler Peak product is far easier to deploy and manage," says Sundström. "One vendor required at least one person to maintain and configure the system and both vendors would have taken us several days to deploy. We were able to get Silver Peak up and running in a few hours."

Viking Line deployed Silver Peak software running in physical appliances in the data center and on the ship. The software eliminated 40 percent of the traffic overall and at times more than 95 percent of the HTTP and CIFS traffic on their connections (See Figure 2). More important than the results on paper are those on the ground. Shopping bags are no longer left in the stores and Viking Line's internal systems are operating more effectively. "There's been a definite improvement in our systems and we're no longer holding up ships from leaving the harbor," he says.

Overtime, Viking Line hopes to benefit from Silver Peak's Dynamic Path Control, which will select the optimum path between two locations. Dynamic Path Control assesses latency and loss in real-time, choosing the best path for each application. The cruise ships will then be able to always select the "best" path from the available Wi-Fi, 3G/4G, or satellite connections.

Viking Line is just one of the thousands of businesses that depend on Silver Peak every day to accelerate their networks. Find out how Silver Peak can help your network. Download a fee trial of the Silver Peak software today from http://www.silver-peak.com/marketplace.

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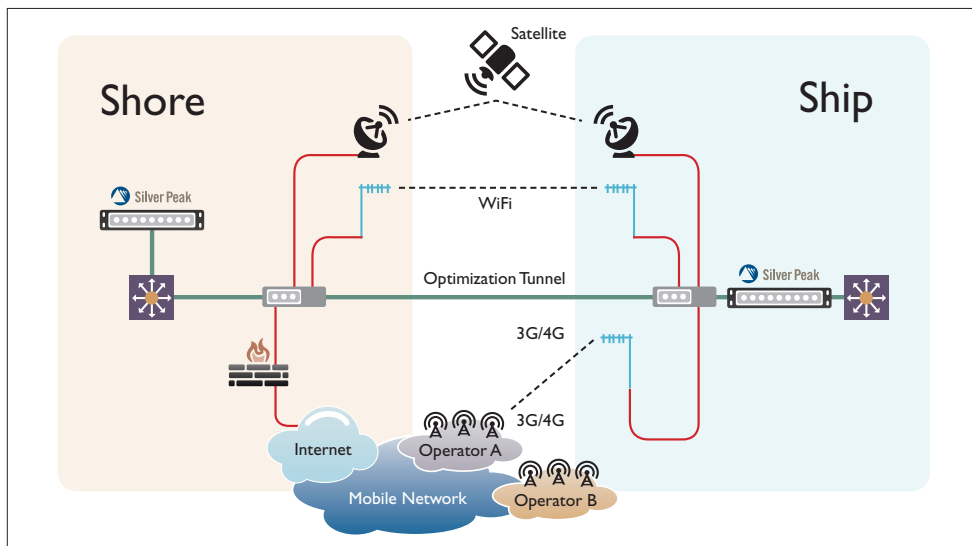

Figure 2: Viking Line ferries connect to satellite, Wi-Fi, and 3G/4G, allowing access when docked and at sea.

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