

## IN BRIEF

### Industry

- » Technology

### Challenges

- » Improve application performance for 75 offices across Europe, Middle-East, and Africa (EMEA)
- » Requirement for faster and more efficient network usage
- » Addition of new offices without compromising the performance of the WAN

### Solution

- » Steelhead appliances installed in 29 offices

### Benefits

- » LAN-like performance to all offices equipped with Riverbed Steelhead appliances
- » Eliminated the need to install servers in the new offices
- » Bandwidth utilisation reduced by 84% in one month

**NAVTEQ**™



# NAVTEQ

## Riverbed® Steelhead® Appliances Lift NAVTEQ's WAN to Higher Level

NAVTEQ ([www.NAVTEQ.com](http://www.NAVTEQ.com)) is a provider of comprehensive digital map data for car navigation systems, mobile navigation solutions, web-based map applications, and government and business solutions. NAVTEQ creates electronic maps and the associated content in support of navigation and global location-based service solutions. The company was founded in 1985 in Sunnyvale, U.S. and is currently headquartered in Chicago. NAVTEQ has a total of 3,000 employees who are active in 167 offices in more than 31 countries.

The head office for Europe, Middle-East, and Africa (EMEA) is located in Veldhoven, Netherlands, and the network, desktops, and servers for all 75 offices across EMEA, are managed from this central location.

### Challenge: Increasing Application performance for 75 offices

The need to exchange documents and files quickly is vitally important for remote offices spread over a large region. With increasing network latency and greater congestion causing delays in business processes, employees were becoming extremely frustrated by the length of time it would take to access key applications and files.

"Application performance was being put under increased pressure as a result of acquisitions and new local offices," comments Theo Thijs, Director of Information Services EU at NAVTEQ. "Each time an office was added, it had to be connected to the existing network. With additional pressure on the network, speed was being compromised. The result was an increase in the time it took to send files across the network to other field offices."

NAVTEQ used a central Exchange server for the entire EMEA region, so sending and retrieving e-mail from one branch office to another always required data transfer to a central location. In addition, NAVTEQ employees also needed to open Microsoft Word, Excel, and PowerPoint files over the WAN, which also increased the load on the network.

### Solution: Steelhead Appliances Overcome Network Limitations

NAVTEQ initially evaluated a number of possible solutions for improving the performance, and decided to implement one of them. Despite trying different network configurations and installing various updates, the company was unable to get the system up and running. The headquarters in Chicago faced the same problem, and so the logical step was to jointly look for a better solution.

NAVTEQ's storage provider and a reseller of Riverbed, was aware of the network issues that the company faced, and brought the wide-area data services capabilities of Riverbed's solution to NAVTEQ's attention. Thijs recalls, "Since the Chicago office faced the same problems, I decided to propose the Riverbed solution. The initial proposal was well received by all, and the company decided to run a trial in both the United States and the Netherlands."

**"The ease-of-use and speed of implementation offered by the Riverbed Steelhead appliances in particular were instrumental considerations during the decision process. The Steelhead appliances are practically plug-and-play."**

The results of both tests exceeded the company's expectations. "The ease-of-use and speed of implementation offered by Riverbed Steelhead appliances in particular, were instrumental considerations during the decision process. The Steelhead appliances are practically plug-and-play," explains Thijs.

Based on the test results, NAVTEQ decided to purchase Riverbed Steelhead appliances for the United States as well as the EMEA region. In the first instance, 28 Steelhead appliances were ordered for NAVTEQ EMEA. Currently the solution has been implemented at approximately 20 offices in different countries, but this number is gradually expanding as an office is equipped with Steelhead appliances each week. At the start of 2008, NAVTEQ had 29 Steelhead appliances in use; however over the next six months this number is expected to double.

**Benefits: LAN-like network performance at offices, phase-out of local servers, and a reduction of the management and bandwidth costs**

After a Steelhead appliance is deployed in a branch office, local servers are phased out and the infrastructure is gradually migrated to the central server at the data centre in Veldhoven, where all data is directly stored. In locations that still have servers, the backup and recovery of the data is now managed centrally. Data is first backed up locally using Legato and remote Symantec Puredisk, and then accelerated over the network to the main data centre.

**"This has been one of our best investments ever. The implementation, installation, and roll-out are very simple. Application performance has been considerably improved."**

When new offices are opened, Steelhead appliances will be implemented immediately, so that local servers are no longer a necessity. "Riverbed's high-performance solution gives users the impression that they are working on a local network and local server," comments Thijs. "To give an example of how fast users are now able to work, the download time for contracts by our legal department has improved immensely. The server is based in

Chicago and before it took as long as 10-15 minutes to open documents. Now with the use of Riverbed Steelhead appliances it only takes 10-15 seconds."

Apart from improving the network performance, the deployment of the Riverbed Steelhead appliances has resulted in other efficiencies, for example retrieving e-mail is now much faster. E-mail is directly forwarded and the connection is constantly maintained using Riverbed's unique MAPI optimisation features. Even if users log out, they can gain direct access to all their e-mail messages when they log in again.

The purchase of Steelhead appliances has resulted in various cost efficiencies for NAVTEQ. Its server fleet has been substantially reduced, resulting in lower management costs, and less bandwidth is required to operate the WAN at an appropriate level.

"Over the last month bandwidth utilisation has been reduced by 84% and we've experienced a reduction in data of 83%, from 2.2TB to 365GB. In addition the Central Management Console (CMC) now enables us to monitor the performance improvements and manage the configuration from one application. Also, by centralising the backup and recovery processes we have been able to reduce the associated management costs," comments Thijs.

"This has been one of our best investments ever. The implementation, installation, and roll-out were all very simple. Application performance has been dramatically improved, and moreover, the backup and recovery processes are now managed from a central location, thus increasing the manageability," concludes Thijs.

## SUMMARY

As a result of various acquisitions and the quick expansion of offices to a total of 75 across EMEA, the performance of applications over NAVTEQ's wide area network (WAN) was coming under increasing pressure. As the company continues to expand it estimates that the number of local offices will increase to as many as 90. This made it necessary for NAVTEQ to deploy a WAN optimization solution. NAVTEQ had implemented an alternative solution, but upon its failure they turned to Riverbed, where the ease-of-use features and speed of implementation, in particular, were key considerations during the decision process. With the Riverbed Steelhead appliances deployed, NAVTEQ is now able to deliver application performance that gives users the impression that they are working from a local server and a local network. In addition, deployment of the Steelhead appliances allows NAVTEQ to phase out its local branch servers, reducing both management time and costs.



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About Riverbed

Riverbed Technology is the IT infrastructure performance company. The Riverbed family of wide area network (WAN) optimization solutions liberates businesses from common IT constraints by increasing application performance, enabling consolidation, and providing enterprise-wide network and application visibility – all while eliminating the need to increase bandwidth, storage or servers. Thousands of companies with distributed operations use Riverbed to make their IT infrastructure faster, less expensive and more responsive. Additional information about Riverbed (NASDAQ: RVBD) is available at www.riverbed.com



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