

# High-speed solutions

Karneval Media solves network monitoring challenges and enhances customer retention through its data warehouse.

by Chris Parsons and Sandra Verwied



The media and entertainment industry continues to be one of the most dynamic growth markets. In the Czech Republic, Karneval Media is one of the leading cable TV services and broadband Internet access providers, with most of its customers in the capital of Prague and other metropolitan areas throughout the nation.

## Business objectives

Since May 2006, a Teradata enterprise data warehouse has strategically supported Karneval's expansion into a multi-play service provider business and its ongoing customer acquisition efforts. The Teradata solution also helps increase customer satisfaction and successfully introduce new services into the market by monitoring and managing its network and generating intelligence reports from distributed data sources.

Karneval Media serves an already established market. Three years ago, Karneval added the Internet service provider (ISP) business to its original business of operating a national cable TV network. Its broadband services offer of 1Mbit/s to 7Mbit/s lines is well-received by the rapidly growing customer base. In 2005 alone, Karneval was able to secure 40,000 new

customers. A large part of the company's continued expansion can be attributed to its voice over Internet protocol (VoIP) services. Added in September 2006, VoIP represents a strategic expansion of Karneval's product portfolio.

## Why Teradata

"Our brisk growth frequently taxed the existing management software responsible for monitoring and managing our networks," reports Daniel Arnost, Information Services manager at Karneval. "More specifically, network utilization reporting and associated bottlenecks could only be done in monthly intervals. Based on this type of information, we could hardly make qualified decisions with regard to the necessary expansion of the network. The risk of potentially losing customers because of temporarily bad transmission quality or declining bandwidth availability became more apparent and needed to be addressed."

During the selection process of a new network monitoring and management system, Arnost and

his three-member team initially reviewed the traditional providers in this segment. "But we soon realized that the offered solutions didn't meet our requirements, particularly in the areas of reliability and price/performance ratio. Since we were most concerned about the analytical component and a particular high-processing power for data from distributed sources, our next deliberations centered on a data warehouse-based solution," explains Arnost.

Because of these requirements, the team chose the Teradata Warehouse solution. Its implementation, running on IBM xSeries servers, began in the spring of 2006. "We made a deliberate decision to run the data warehouse solution on our existing hardware platform since the current performance delivered by this platform is sufficient for the time being and the near future, even accounting for the constantly increasing data amounts from our operational network monitoring systems," says Arnost.

The results corroborate his strategy: Network monitoring reports that used to take 20 hours to generate and were available only once a month can now be executed, on request, to decision makers in less than four minutes. Detailed monitoring reports on network usage—e.g., on peaks in network access or increased network traffic due to file downloads—are very important for Karneval to continuously adapt its network performance to its customers' needs and maintain the quality of its services. "Keeping up a superior quality in services and technology is crucial

## Solution results

- > Significant reduction of reporting cycle time from weeks to a few minutes, enabling Karneval to successfully enter new business segments
- > Improved report capabilities and quality
- > Near real-time network monitoring
- > Development of targeted direct marketing campaigns

for customer retention and, therefore, vital to our business,” adds Arnost. The data generated for the reports may also be used for long-term analytics to predict further usage demands of the network.

“Today, we can track Internet users’ behavior with regard to bandwidth needs and usage almost in real time,” says Arnost. Network monitoring was the first step in the implementation of Teradata at Karneval. Support of marketing, customer care and sales followed.

Today, the solution allows a complete automation of regular reports and migration of ad

SQL Server Integration Services (SSIS), which runs MultiLoad and FastLoad jobs as well as SQL (BTEQ) jobs for post-extract, transform and load (ETL) data processing.

The data warehouse also supports the company’s provisioning efforts and, as a result, has become a key instrument for the company’s expansion. For example, Karneval is able to plan and purchase network equipment and bandwidth capacity based on the information coming from the data warehouse. Furthermore, the company uses the active enterprise integration solution for moni-

the parameters are a key performance indicator for the company.

## Strategic benefits

“Because of these comprehensive, near real-time reports and better quality of information, we were able to successfully move into the VoIP business,” explains Arnost. “VoIP is a very competitive, fast-moving market segment. Without [the Teradata Warehouse] offering us reports and its decision-supporting information in time and frequency as needed, entering this market segment would have been at a very high risk.

“Moreover, the data archiving capability is equally important to us. We store user data, including relevant historical data of the last 18 months, in the data warehouse.” In addition, Karneval utilizes the Teradata Warehouse for the development and execution of direct marketing campaigns, whereby customer segmentations are standardized.

Additional data volume growth beyond the company’s own could result, for example, from a scheduled merger with another media and entertainment provider. Karneval also plans to utilize the Teradata Warehouse to service further reporting needs within other corporate business areas. “We envision that in the future we’ll generate all management reports via the data warehouse,” reports Arnost. “The necessary integration of data sources is already ongoing and slated for completion in the fall of 2007.” **T**

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*– Daniel Arnost, Karneval Media*

hoc queries from transactional systems on the data warehouse. The loading of data into the data warehouse occurs daily and concludes within 15 minutes. The whole data transformation process is orchestrated by Microsoft

toring of network quality based on short- and long-term analyses of trends. Results are used to plan the rollout of VoIP and digital TV services across the network. Analyzing parameters of network quality is another task, as

Behind the solution: Karneval Media	
Teradata Warehouse powered by:	Teradata Database V2R6.1.1; IBM xSeries Server
Data Sources:	IMS—network monitoring and management system; RR—subscriber management system; MI4C—CTI system; OpenMinder—customer relationship management operational system
Operating System:	Windows
Teradata Utilities:	MultiLoad, FastLoad and BTEQ
Tools/Applications:	Products from Microsoft