

Data warehouse technology solves network monitoring challenges and enhances customer retention.

The Customer

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 service and broadband Internet access providers, with customers situated predominantly in the capital city of Prague and in other metropolitan areas throughout the nation.

Business Objectives

Karneval Media is serving an already established market. Three years ago, Karneval expanded its national cable TV network services and began operating as an internet service provider (ISP). The company's broadband services offer of 1 to 7 Mbps lines has been well received by its rapidly growing customer base. In 2005 alone, Karneval was able to secure 40,000 new customers – continuing its upward growth path.

Since May 2006, Karneval has relied on an enterprise data warehouse from

Teradata to support its expansion into a multi-play service provider and its ongoing customer acquisition efforts.

The Teradata solution also helps Karneval increase customer satisfaction and successfully introduce new services by monitoring and managing the company's network as well as generating intelligence reports from distributed data sources.

The system also helps support Karneval's VoIP services, a strategic extension of its portfolio of product offerings added in September 2006.

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," explains Arnost. "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."

Because of these specific requirements, the team ended up selecting a Teradata solution. The implementation, including 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 next future, even accounting for the constantly increasing data amounts from our operational network monitoring systems," notes 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. peaks

Results

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

in network access or increased network traffic due to file downloads, are very important for Karneval to continuously adapt its network performance to its customer's needs and maintain the quality of its services. "Keeping up a superior quality in services and technology is crucial 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," he explains.

Network monitoring was the first step in implementation of the Teradata system in Karneval. Support of marketing, customer care and sales followed immediately. Today, the solution allows a complete automation of regular reports and migration of ad-hoc queries from transactional systems on the data warehouse, which is updated daily in a process that takes less than 15 minutes. Data feeds are processed from various platforms such as AS/400 DB2, MS SQL and MySQL. The whole data transformation process is orchestrated by MS SQL Server Integration Services (SSIS), which

runs Teradata MultiLoad and Teradata FastLoad jobs as well as SQL (BTEQ) jobs for post-ETL data processing.

The data warehouse also supports Karneval's provisioning efforts and, as a result, has become a key instrument for the company's expansion. For example, Karneval is able to plan for and purchase network equipment and bandwidth capacity based on the information coming from the data warehouse. Furthermore, the company uses the active enterprise intelligence enabled by Teradata to monitor network quality based on short- and long-term trend analyses. The results are used to help plan the rollout of VoIP and digital TV services across the network. Analyzing parameters of network quality, one of Karneval's primary KPIs, is another task.

"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 system) offering us reports and decision support information in time and frequency as needed, entering this market segment would have been at very high risk."

"Without Teradata, entering new business segments like VoIP successfully wouldn't have been possible."

- Daniel Arnost, Information Services Manager

The Teradata Solution

> The Teradata System

Teradata Database 6.1.1
Teradata 8.1

> Data sources

IMS, network monitoring and management system
RR, subscriber management system
MI4C, CTI system
OpenMinder, CRM operational system

Arnost continues, "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 system 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 system to service 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."

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