



*Never Settle for Less.*

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## Overview

### The need

- To analyze transaction-level details on an ad hoc basis to optimize efficiencies based on outlier data
- To capture data from more than 10 percent of the business
- To boost performance when querying more than three months of data

### The solution

Enterprise data warehouse on IBM Netezza 1000 data warehouse appliance for ad hoc analysis and operational reporting

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## Con-way Freight

*Leveraging best-of-breed business intelligence for customer satisfaction*

Con-way Freight® delivers highly efficient less-than-truckload (LTL) performance, comprehensive coverage and service excellence through its 291 service centers across North America, while also offering cross-border service to and from Canada, Mexico, Asia, Europe, the Caribbean and domestic offshore locations. Con-way Freight makes it easy for customers to eliminate supply chain waste by consolidating shipments and optimizing freight movement. The result: lower costs to transport materials which creates customer value and profitability. Also, by placing fewer trucks on the road — reducing fuel consumption, carbon emissions and traffic congestion — Con-way Freight is an eco-friendly industry leader.

To keep service levels high over the long term, Con-way Freight continuously evaluates and improves its strategy and process management using business intelligence (BI) powered by MicroStrategy and IBM® Netezza®. MicroStrategy equips Con-way Freight with robust front-end reporting, and IBM Netezza provides a high-powered data warehouse and analytic engine. This best-of-breed business intelligence platform allows Con-way Freight to leverage vast amounts of transaction-level data for deep customer understanding and data-driven business decisions.

### **Before: a company with a vision**

In the summer of 2007, Con-way Freight had no companywide business intelligence system in place. It was using an Oracle data warehouse that offered limited reporting on aggregated customer relationship management and shipment data. In total, less than 10 percent of Con-way Freight's data was captured within the incumbent system. Even with the limited level of reporting offered by the warehouse, it suffered from performance issues. Simple queries typically took 20-30 minutes to return, and queries of data covering more than three months took substantially longer. Ad hoc reporting was simply impractical.



**Business Benefits**

- Analysis on more than 50 percent of all business processes
- Enablement of ad hoc querying by hundreds of users across the enterprise
- Simplicity: in production within three weeks of purchase
- Less than one FTE managing data warehouse

Con-way Freight realized that an investment in business intelligence would be essential to its success, so it established a BI Vision to guide its business intelligence development initiatives. Con-way Freight’s BI Vision comprises five criteria that still hold strong today:

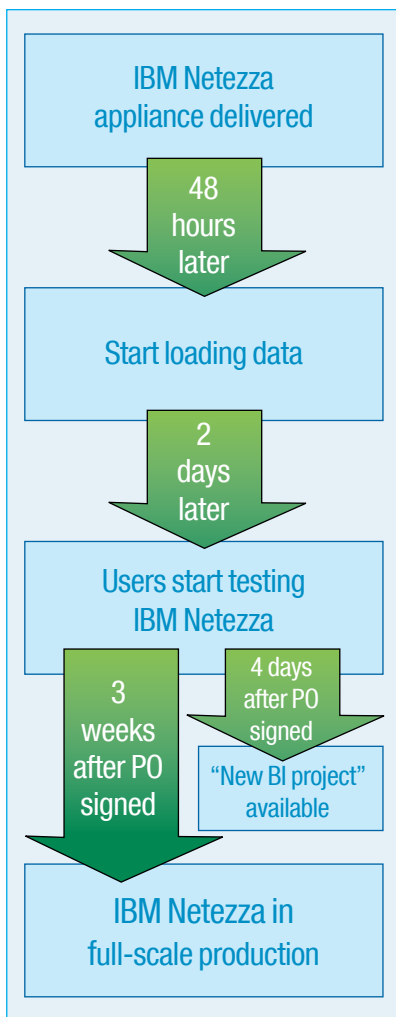
- **Comprehensive platform:** a single data warehouse that captures data from all areas of the business
- **Granular:** the capability to store and report on minute, transaction-level details
- **High performance:** fast data loading and query processing for speed-of-thought analysis
- **Ad hoc:** a flexible environment that facilitates asking any question, at any time
- **Self-service:** an easy-to-use platform for users throughout the business to leverage

Due to the fit with its BI vision and its relational online analytical processing (ROLAP) architecture, Con-way Freight first decided to deploy MicroStrategy as its front-end BI reporting application. Once MicroStrategy was deployed, in the fall of 2007, Con-way Freight could access its data. However, this further stressed the performance limitations of the incumbent data warehouse. Wanting to leverage the full potential of MicroStrategy, Con-way Freight started researching new data warehouse options, including those offered by IBM® Netezza®, Teradata and Oracle.

**IBM Netezza: performance, value, simplicity**

IBM Netezza and Oracle made Con-way Freight’s short list of data warehouse vendors, and both were brought in to perform proofs of concept. IBM Netezza’s promises of performance, value and simplicity aligned with Con-way Freight’s BI Vision. Throughout the evaluation, Con-way Freight was also impressed with IBM Netezza’s consistency and transparency.

In terms of simplicity, IBM Netezza’s initial set-up took less than 48 hours, and within the next two days, data was loaded and users had access to the system. Next, IBM Netezza’s performance advantage became clear. The data loading process took 300 seconds on IBM Netezza, versus 3,000 seconds on the incumbent. When users began to run reports on the IBM Netezza appliance, they were thrilled with the speed of the system – MicroStrategy reports could run, on average, 50 times faster on the IBM Netezza system than on the old data warehouse. The performance improvements came without adding overhead, yet offered these additional benefits: user self-service; ad hoc and data mining exploration; and the scale to handle terabytes of data. The evaluation revealed that IBM Netezza offered the best value, and Con-way moved forward accordingly. Four days after signing the



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## Solution Components

- IBM Netezza 1000

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*“Since deploying IBM Netezza, we are better equipped to answer complex questions, on the fly and iteratively. And we can do this with only one person administering the appliance.”*

—Scot Lambert, Senior Manager of  
Enterprise Business Intelligence,  
Con-way Freight

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purchase order, the new BI project was made available to internal users at Con-way Freight. And three weeks from the purchase date, the IBM Netezza-powered platform was running in full-scale production.

### **Now: best-of-breed business intelligence**

Today, Con-way Freight’s enterprise data warehouse provides ad hoc business intelligence and some operational reporting for more than 50 percent of processes throughout the organization. Most access to IBM Netezza happens through MicroStrategy, but some direct connections are made via Tableau and other reporting and analysis tools. The BI platform offers Con-way Freight ad hoc performance and self-service access to the data that can be used on-demand in meetings. “We always had this vision of sitting in a meeting where an executive asks a question, and being able to give them an accurate answer right then and there by running a query and getting real-time results,” says Scot Lambert, Senior Manager of Enterprise Business Intelligence, at Con-way Freight. “That’s our everyday way of doing business today with the IBM Netezza appliance.”

Con-way Freight uses its BI platform for two general applications: ad hoc analyses and score-carding. The analyses include identifying which shipments to inspect, forecasting the effects of internal and external factors on business activity, and segmenting customers for targeted customer relationship management (CRM) programs and marketing initiatives. With its IBM Netezza-powered environment, Con-way Freight does not summarize or aggregate any of its data – this is beneficial when running exception analyses to determine which areas of the business could be improved. Personnel can drill-down to find specific information about any customer, percentages of on-time deliveries, measurements of how often freight is damaged or misplaced, and more.

Scorecarding lets Con-way Freight measure financial performance and improve overall corporate performance management by comparing performance against set goals. Users can render linehaul reports, sales dashboards and operational scorecards with ease, providing operations personnel with a weekly view of how they’re doing across many metrics. The metrics are based on measuring the efficiency and effectiveness of operational processes, and again, each report is based off of detailed data without any summaries or aggregations. Con-way Freight is continuously improving its BI platform and plans to add more metrics, such as accident and injury statistics, to the scorecards moving forward.

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—Scot Lambert

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### **The value of BI: priceless**

The business intelligence environment powered by MicroStrategy and IBM Netezza is transforming the way Con-way Freight does business. In a matter of seconds, Con-way Freight can run ad hoc reports to look at shipments delivered on a specific day to a specific region, state or customer. Every report is calculated on granular data with highly reliable accuracy. Furthermore, Con-way Freight’s users are happy because administration of the system is much easier than the incumbent data warehouse.

### **Moving forward: ongoing optimization**

Con-way Freight is not done fulfilling its BI vision. As the company continues to embrace BI and find success, demands on the system grow, data volumes multiply and new challenges inevitably arise. “Once users have had a taste of the new possibilities enabled by real-time analytics, they want to ask even more questions, and more and more users want access to the IBM Netezza box,” says Lambert.

Con-way Freight is focused on staying ahead of that demand by constantly trying to improve and innovate across the enterprise, and by encouraging more employees to use business intelligence. Con-way Freight’s Business Project Managers and Operations Research teams are also using IBM Netezza as a platform to facilitate continuous improvement. The teams already rely on data and metrics sourced directly from the data warehouse for their models, and they hope to deploy statistical and operations models directly in the database in the future.

By embracing the strategy and use of business intelligence throughout the business, Con-way Freight is well positioned for continued long-term success. “The strategic importance of business intelligence and analytics is recognized across Con-way Freight. We know it is a critical part of our ability to stay ahead and optimize industry practices,” says Lambert.

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### **About Con-way Freight**

Con-way Freight® is the industry’s leading less-than-truckload (LTL) freight transportation company, providing guaranteed, day-definite regional and transcontinental service with exception-free delivery, on-time service performance and faster transit times through a single, unified network of more than 300 service centers in the United States, Canada, Mexico and Puerto Rico. Con-way Freight offers LTL freight transportation across North America and through Global LTLTM delivery in the United States from around the world. Global solutions include international less-than-container (LCL) ocean shipments from Asia through its OceanGuaranteed® service; expedited U.S. delivery for inbound international cargoes from Europe through an exclusive alliance with TNT; direct service to more than 30 Bahamian and Caribbean ports through TropicalDirectSM; and domestic offshore transportation to Alaska, Hawaii and Puerto Rico. Based in Ann Arbor, Mich., Con-way Freight is a certified FAST highway carrier and is C-TPAT/PIP, ACE- and CSA-certified.

Con-way Freight is a subsidiary of Con-way Inc. (NYSE: CNW), a \$4.3 billion diversified freight transportation and logistics services company.

For more information, visit [www.con-way.com/en/freight](http://www.con-way.com/en/freight).

### **About IBM Netezza**

IBM Netezza pioneered the data warehouse appliance space by integrating database, server and storage into a single, easy to manage appliance that requires minimal set-up and ongoing administration while producing faster and more consistent analytic performance. The IBM Netezza family of data warehouse appliances simplifies business analytics dramatically by consolidating all analytic activity in the appliance, right where the data resides, for blisteringly fast performance. Visit [netezza.com](http://netezza.com) to see how our family of data warehouse appliances eliminate complexity at every step and lets you drive true business value for your organization. For the latest data warehouse and advanced analytics blogs, videos and more, please visit: [thinking.netezza.com](http://thinking.netezza.com).

### **IBM Data Warehousing and Analytics Solutions**

IBM provides the broadest and most comprehensive portfolio of data warehousing, information management and business analytic software, hardware and solutions to help customers maximize the value of their information assets and discover new insights to make better and faster decisions and optimize their business outcomes.



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