

# Nielsen Media Research

“I would venture to say Sybase IQ is the fastest in the industry. We load almost 10 billion rows a month, a terabyte a quarter. With Sybase IQ, it just flies.”

— Craig Silver, Senior Database Architect,  
Nielsen Media Research

## INDUSTRY

Communication/Media

## KEY BENEFITS

- Provides overnight and historical audience rating data on demand
- Delivers responses 10 to 100 times faster even for the most complex queries against terabytes of data
- 70 percent compression ratio produces significant hard-cost storage savings
- 800 percent faster data loads increase productivity during maintenance window
- New client products and applications added quickly and easily
- Eliminates monthly CD-ROM mailings to clients
- Reduces complexity, costs and risks of deploying a new data warehouse

## SYBASE TECHNOLOGY

- Sybase IQ

Timely, accurate and detailed information provided by Nielsen Media Research governs the \$65 billion TV advertising industry. Data is its lifeblood. Using Sybase® IQ, Nielsen developed an online audience data warehouse enabling its clients to access audience data through the Internet.

## FINE-TUNING BIG DECISIONS

Nielsen Media Research is the leading provider of television audience measurement and related services in the world. With hundreds of broadcast channels running 24/7, it's not surprising that there are hundreds of terabytes of data on audience demographics and viewing habits residing in the company's data center. This data is critical to broadcasters and advertisers alike who rely on it to make and fine-tune programming decisions and advertising placements.

“The broadcast industry is in the business of creating and delivering content to the TV audience, and they want to know how effective that content is,” explains Kim Ross, CIO at Nielsen. “The advertising industry is in the business of trying to make sure people watch their ads. So advertisers use Nielsen data to determine where to place their ads to get the product message to the right audience at the right price.”

For many years, Nielsen mailed audience-rating data on CD-ROMs to its clients each month. But when demand grew for more timely and detailed information, Nielsen decided to build an online data warehouse that would allow each client to access its vast data store on an ad hoc basis and to query that data rapidly.

“We needed to build a very large, read-only, analytic database that could provide query response times that were much faster than what you can get from traditional relational databases,” says Ross. “And we needed to do it efficiently and cost-effectively. Sybase IQ fit the bill perfectly.”

## A SOLUTION FOR UNIQUE NEEDS

To help validate its architectural concepts for this new, Web-accessible data warehouse, Sun and Sybase built a “reference architecture” in the Sun iForce Solution Center to test Nielsen's concept and workloads. This proof-of-concept led to the development of the Enterprise Data Warehouse Reference Architecture and provided Nielsen with valuable feedback that their ambitious new system would work. This allowed the Nielsen development team to reduce the complexity, costs and risks of deploying its new audience data warehouse.

“Each of our clients has different interests in different slices of the data,” says Ross. “So part of our challenge was to build a data warehouse platform our clients could use to meet their unique query and reporting needs.”

Several years ago, Nielsen chose to migrate much of its processing from a mainframe system to a UNIX two-tier, client-server system powered by distributed Sun servers. Now, with the deployment of the new audience data warehouse, Sun UNIX servers remain at the core, but the architecture has moved to n-tier.

“We specifically chose Sybase IQ to serve as the platform for our audience data warehouse,” says Ross, “because it is optimized for analytics across very large volumes of data. We use the right technology for the specific task at hand. For our audience data warehouse, Sybase IQ is the right technology.”

## SYBASE HELPS NIELSEN SUCCEED

Sybase IQ enables Nielsen to address a number of formidable challenges inherent in building and maintaining a very large data warehouse. For instance, Nielsen loads almost 300 million rows a day to the warehouse. And this needs to be done in a very narrow time frame—an hour or two at the most. Nielsen has found Sybase IQ's load speed to be eight times faster than the solution it previously used.

"I would venture to say Sybase IQ is the fastest in the industry," says Craig Silver, senior database architect of the data technology group at Nielsen. "We load almost 10 billion rows a month, a terabyte a quarter. With Sybase IQ, it just flies."

Sybase IQ's data compression functionality saves Nielsen Media Research hard dollars by reducing the company's storage requirements by about 70 percent. "When you're dealing with less than a terabyte of data," notes Ross, "the cost of storage is not that significant a factor. When you're dealing with tens of terabytes, as we are, however, it's a very significant factor—you're talking about millions of dollars. To be able to save that kind of money is very important to us."

Most important to Nielsen Media Research's clients, perhaps, is Sybase IQ's ability to deliver answers to even the most complex queries 10 to 100 times faster than traditional data warehouse technologies. This enables them to sort through enormous volumes of data (the warehouse currently contains 20 terabytes of data and is growing at the rate of two to three gigabytes a day) to get the intelligence they need to make the most effective and profitable business decisions.

Sybase IQ's multiplexing capability also allows Nielsen to add new products and applications that can access the audience data warehouse in order to satisfy ever-evolving client demands. This eliminates the need to create duplicate databases for each new application.

"The broadcast industry continuously challenges us to measure a more complex environment—to measure things in ways that have never been measured before," says Ross. "Our clients want more powerful analytical applications and ever more detailed amounts of information. Meeting our clients' needs means building more powerful and more useful applications. It also means building and managing larger, more complex databases and serving that information to clients in more convenient ways—whether that means through the wireless Internet environment where they're using wireless laptops or enabling them to access it on their PDAs. Thanks to Sybase IQ, we're confident we'll be able to continue to deliver value to our clients, while at the same time producing a significant, bottom line ROI for Nielsen Media Research."