

E.ON Manages Data Quality Issues and Massive Data Volume Increases with Lavastorm



RESULTS:

By implementing Lavastorm, E.ON has been able to:

- Expose and eliminate numerous data gaps between their different operating systems
- Clean up data quality issues more quickly by speeding the frequency of analysis from monthly to weekly or every other day
- Reduce management reports by 50%
- Get more value out of their BI investment by improving data quality so that dashboards and reports are more trustworthy
- Automate much of their data quality improvement efforts by eliminating time-consuming manual SQL and Excel data processing
- Improve the management team's visibility and understanding of the data quality improvement initiatives with visual models and presentations

“Lavastorm exposes data anomalies that we wouldn't see with a traditional BI system. With Lavastorm, we can easily expose and fix gaps in the data, which if unnoticed could lead to millions of dollars in losses.”

Torbjörn Stenström, Operational Development, E.ON

CUSTOMER PROFILE

With operations in more than 30 countries and more than 30 million customers, E.ON is one of the world's largest investor-owned electric utility service providers. E.ON's diversified business consists of renewables, conventional and decentralized power generation, natural gas, energy trading, retail and distribution. The company's Swedish subsidiary, E.ON Elnät, is one of the largest electricity network owners with a network that stretches nearly 134,000 kilometers, includes more than 44,000 network stations, and services approximately 1 million customers.

SITUATION

In responding to outages caused by several severe storms, E.ON Elnät realized that data quality was crucial to their business. In 2005, a major storm interrupted service for 341,000 customers and in some cases led to outages that lasted four weeks. Data quality issues made it difficult to determine the exact location of the outages and hindered their recovery efforts. Subsequently, E.ON Elnät committed to improving data quality so they could respond faster when faced with unexpected events and severe weather. In just a couple of years, their data quality improvements contributed to shortening the worst outages from several weeks to just a few days.

Their success spurred an even greater desire to improve quality, but they recognized that that they needed to dramatically upgrade the agility and scalability of their data management processes. Their initial solution required them to manually generate more than 60 static reports by processing numerous SQL scripts and Excel worksheets. The process was so time consuming that it could only be run monthly – rather than weekly or daily as they desired – and it couldn't address the explosion in ad hoc queries that they were experiencing. In addition, the company faced a massive 700 fold increase in data volume due to meter readings that began to be conducted on an hourly rather than monthly basis.



They needed a data quality solution that was agile, automated, and scalable, and that could also provide extract, transform, and load (ETL) functions and analytics capabilities.

SOLUTION

E.ON Elnät uses Lavastorm to bring together and compare data stored in their SAP system, network information system (NIS) used to control the grid, meter reading system, and other data files. The visual environment of Lavastorm exposes anomalies, such as unmatched or unpopulated fields in their different systems, and allows analysts to eliminate any discrepancies.

Lavastorm is being used to expose data anomalies related to:

- Customer interactions – eliminate inconsistent data, such as differences between network documentation and the actual physical network structure, that can lead to inaccurate messaging and outages
- Network losses – Reduce data inconsistencies that lead to technical malfunctions and administrative errors, which manifest in network energy losses and significant costs.

After an initial deployment of Lavastorm, E.ON expanded Lavastorm's role to automate the ETL and analysis process, to increase the frequency of their data quality checks to every other day, and to handle the 700 fold increase in data volume associated with hourly meter readings.

BENEFITS

Clear Visibility of Data Anomalies between Systems

While traditional BI systems may hide unpopulated or mismatched fields and records, Lavastorm clearly highlights matches, mismatches, and blanks that exist in the data sources, making it possible for E.ON to quickly uncover and correct anomalies.

Greater Scalability

Lavastorm gives E.ON the ability to process the 700 fold increase in data volume they experienced and to handle the explosion in ad hoc analytic requests they received.

Greater Collaboration and Faster Decision-making

With Lavastorm's visual development environment, E.ON's data analysts could easily discuss the logic and results of their analyses with all levels of the organization, including the executive management team.

Faster Reaction Time, Reduced Losses

Lavastorm automated many manual processes, allowing E.ON to run more frequent data quality checks, resulting in better data quality, fewer net losses, and improved customer interactions.

More Value from BI Investments

Lavastorm transforms the data across E.ON's systems so that their BI systems and dashboards present higher quality, more complete, and more trustworthy data to decision makers.

"Every time I have shown this system to someone, they immediately understand the process and where the losses are. Lavastorm takes away the scary aspects of data analysis so that everyone can actually understand it."

Torbjörn Stenström, Operational Development, E.ON