

Solutions for Communications with IBM Netezza Network Analytics Accelerator

The all-in-one network intelligence appliance for the telecommunications industry



Highlights

The Network Analytics Accelerator combines speed, scalability and smart analytics in one simple-to-use offering that delivers unparalleled insight into the customer and network value chain. This includes:

- Access to data sitting in the silos
 - Models that correlate the data across the silos
 - End-to-end detailed and historical analytics that map customer to network to services to handsets
 - Elimination of redundant data sources and addressing of gaps where they exist
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Identifying network quality issues and placing investments where they'll have the most impact toward reducing customer churn and maximizing revenue is critical in today's ultra-competitive telecommunications market. This requires reporting on massive volumes of transactional usage detail records (xDRs) and other network event information rapidly, to provide visibility into customer usage of the network and related performance issues.

As customers' demands grow for new, always-on services and the volume of network traffic explodes in tandem with the increased usage of smart communications devices, end-to-end network visibility enriched with data from other operational groups is vital to support proactive network and customer experience management.

The Network Analytics Accelerator combines speed, scalability and smart analytics in one simple-to-use offering. An all-in-one network intelligence solution, the Network Analytics Accelerator has been specifically designed to provide a single end-to-end view of a communication service provider's network, services, handsets and customers. It offers the depth and breadth of detailed history on an appliance platform that is fully scalable and pre-packaged to deliver rapid time to value.

Purposefully designed

The Network Analytics Accelerator is composed of a high-performance analytical database, best of breed network intelligence software and a business intelligence reporting framework designed to be production ready in as little as 12 weeks. It contains pre-packaged KPIs/KQIs based on telecom best practices that are designed to accelerate time-to-value. It leverages a well-defined data integration approach that automates the integration of new data sources as much as possible. The solution correlates detailed transactional data coming from across the network



Challenges for today's network operator

- Data residing in silos across the network.
- Data quality that is suspect and inconsistent reports.
- Difficulty in performing end-to-end analytics.
- Current data marts/warehouses can't handle the volumes, velocity and variety of data.
- Business users are demanding enhanced analytic capabilities as new network equipment and services are deployed.

with enriching data from other relevant sources, to deliver unparalleled insight to the customer and network value chain. It also provides the ability to fully analyze that data (both current and historical) — on-demand and across multiple dimensions — through a powerful business intelligence and ad-hoc query layer. This gives users immediate access to the data which is of greatest importance to them, and allows them to ask questions they didn't think they could ask, and get answers in a timeframe previously unattainable.

The Network Analytics Accelerator offers:

- A way to meet internal demands for information from the network regarding network performance, handset performance, customer experience and customer behavior.
- On-demand access to network transactional and operational data which allows users to proactively manage customers, services, as well as handset and network performance.
- A network data repository that can keep up with the explosion of data coming from the network and the proliferation of smart handheld devices.

Real-world uses

This single repository of data can be leveraged by multiple user groups — a load once, use many approach that drives operational efficiency and synergy. The same data sources can support multiple use cases relevant to the line of business and operations teams. The ability to deeply analyze the complete data-set and combine various KPIs/KQIs without limits can support multiple and varied use cases from marketing, customer care, network operations and finance. It provides the ability to view the same customer and transaction from completely different perspectives.

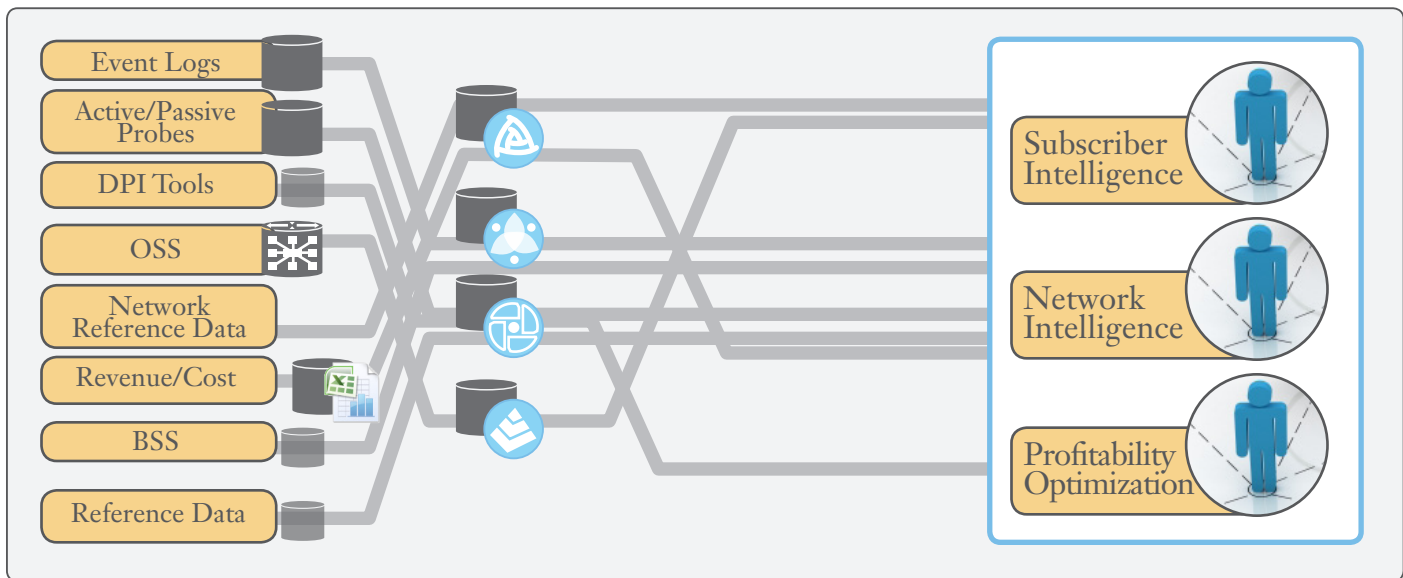


Figure 1 - Current situation: Fragmented, inconsistent insight

For example, marketing may be interested in understanding which subscribers use the latest smartphone models, who has accessed and downloaded the most content from the mobile web, and which particular handsets were used. Customer care would be interested in subscribers who fit that latter profile and who experienced an unacceptable number of download errors while accessing the content. Finance would look at the same set of customers and transactions and want to know the profitability of such transactions. Network operations would be interested in knowing the performance of the relevant network assets used to deliver that content, and try to identify potential congestion issues which may need to be addressed.

Proven in production

The Network Analytics Accelerator has been deployed within a number of Tier 1 customer environments, delivering end-to-end visibility and analytics into network performance, quality of experience and profitability. Implementations to-date cover hundreds of distinct data sources from across the network — both radio access and core (including RNC, SS7, SGSN, GGSN, MMS, SMS, Voice, DPI, etc.) and other reference data (handset specifications database, product/service definition, network inventory, etc.).

The largest implementation of this capability processes more than 17 billion transactions per day — on one platform — with several months' worth of detailed atomic data retained online and a longer retention period for summarized data. This allows for absolute flexibility in trending and historical analysis to be available on-demand.

With this implementation, more than 1,300 users across the enterprise leveraged the detailed data. The solution accelerated speed to insight and enabled the network operator the ability to perform proactive management of their customers, their services, their device portfolio and their network.

The Network Analytics Accelerator solution combines the high-performance IBM Netezza data warehouse appliances with proven network analytics from Ventraq, and an enterprise-grade business intelligence (BI) reporting layer from IBM Cognos in one easy-to-deploy solution. This combination enables near real-time, on-demand data analysis. With the availability of accurate, on-demand transactional usage, detailed records and a network event log are now possible. Additionally, information on individual call records and greater visibility into network usage, customer experience issues and customer behavior is also possible. This leads to faster access to more accurate information which, in turn, can drive data-driven decision making across the entire enterprise.

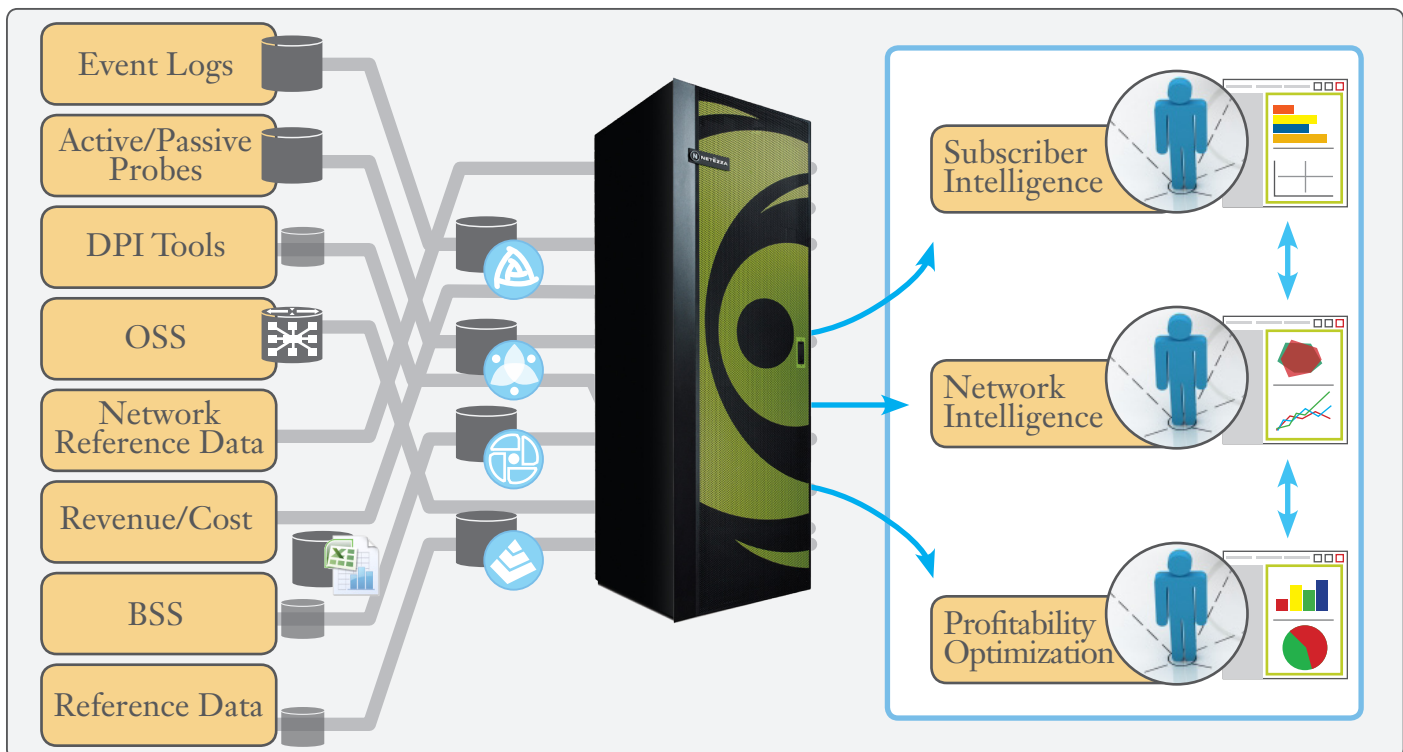


Figure 2 - Network intelligence: Single view of network, customers, services, handsets and profitability

The solution embeds the network, customer and profitability assurance domain expertise of Ventraq in a pre-packaged, fast-to-deploy analytical framework that combines a high-performance ELT layer, a flexible data model, an analytical modeling layer and a power user query tool. Ventraq's capability to process data and perform in-database analytics, leveraging IBM's high-performance database technology combined with IBM Cognos' powerful business analysis software, enables speed-of-thought analytics. This gives users across the enterprise a rich, correlated set of data coming from the organization's network, OSS/BSS platforms, reference data tables and other operational data stores.

IBM Cognos provides pre-built analytical dashboards and reporting that drives faster insight and value through ready-made analytic models and reports, leveraging the data retained on the Network Analytics Accelerator. IBM Cognos also offers line-of-business professionals with actionable, cross-functional, unfettered insight to information previously locked in the network or in silos scattered throughout the organization.

This powerful business analysis software offers organizations an integrated view of performance across business functions and departments. With easy-to-consume dashboards and interactive reporting, business users at all levels can quickly get the insight they require, driving smarter decisions and outcomes that are better aligned with business strategy.

About IBM Netezza data warehouse appliances

The IBM Netezza data warehouse appliance revolutionized data warehousing and advanced analytics 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 data warehouse appliance family simplifies business analytics dramatically by consolidating all analytic activity in the appliance, right where the data resides, for blisteringly fast performance. Visit netezza.com to see how our family of data warehouse appliances eliminates 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.

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.

About IBM Cognos

The IBM Cognos platform is simple for business to use and simple for IT to deploy and maintain. The IBM Cognos platform delivers on the requirements of an enterprise business intelligence (BI) solution, delivering value by addressing the complexity an organization faces in terms of its diverse user requirements, multiple systems and wide variety of data sources. With IBM Cognos BI, customers have one platform that delivers broad user reach, consistent information that users can trust, predictable scale as demands grow, and lifetime agility to leverage both existing and future IT investments as IT and business strategies evolve. The result is a lower total cost of ownership and an increase in IT responsiveness and end-user satisfaction. For more information, please visit: <http://www-01.ibm.com/software/data/cognos/>.

About Ventraq

Ventraq helps communication service providers leverage their networks' big data to better profile their customers; define more targeted marketing; better manage quality of experience, network capacity and costs; and understand true profitability. With domain expertise in telecom network, cost and revenue data, and OSS/BSS solutions, Ventraq is uniquely positioned to help service providers get the most from their data. Partnering with market leaders in advanced MPP technology such as IBM, Ventraq provides in-database processing and analytics for Tier 1 service providers, processing petabytes of information daily on a single platform. Through its unique business analytics framework — encompassing a data acquisition, interpretation and a query layer in a single platform — Ventraq supports enterprise-wide use of the data by providing semantic views of the data accessible by other third-party analytical applications. For more information, please visit: www.ventraq.com.



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