Yellowbrick

EBOOK

Replacing Netezza
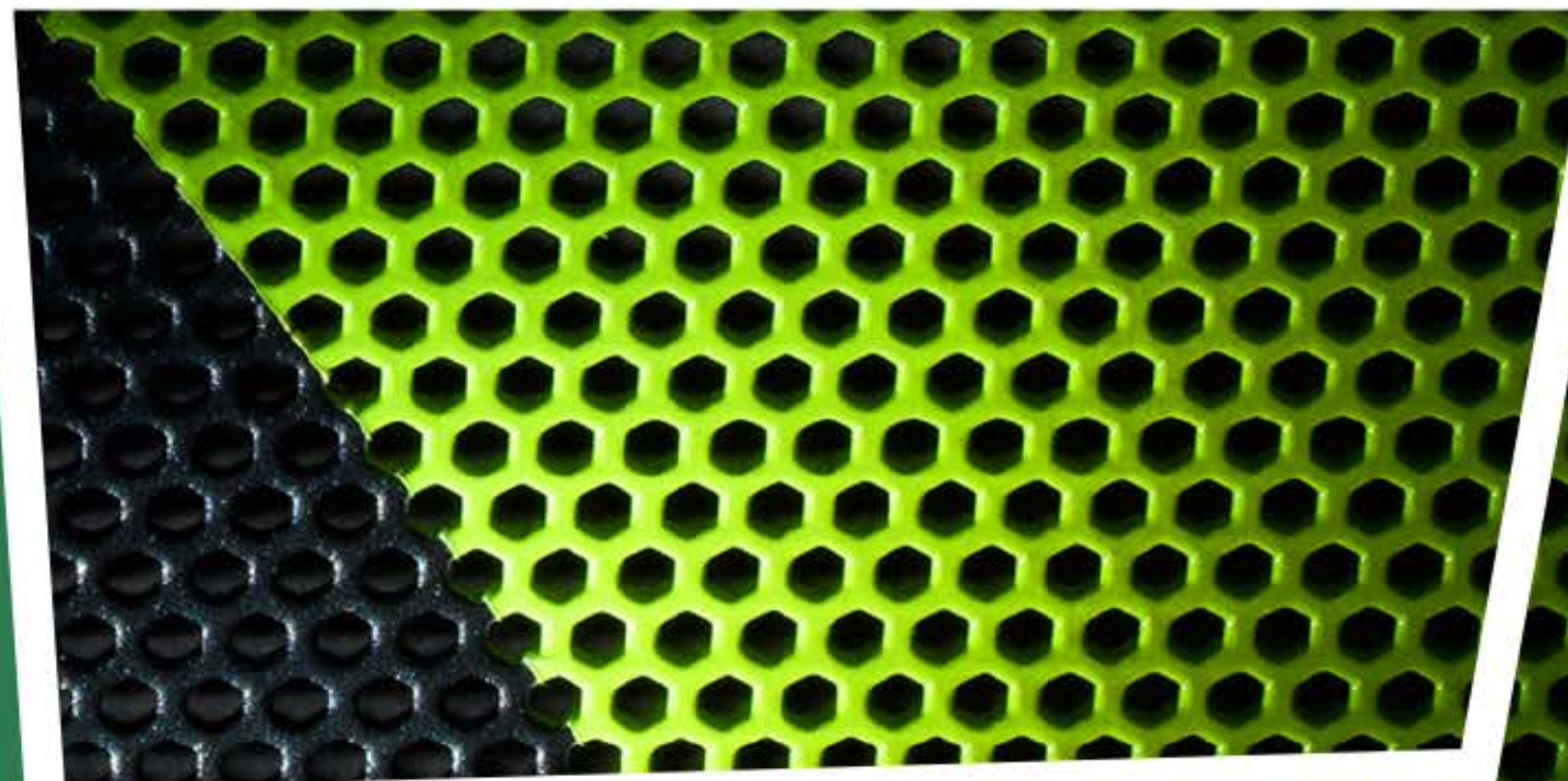
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Introduction

Netezza introduced the first data warehouse appliance in 2003. It was designed for the rapid analysis of large amounts of data that retailers, telecoms, and other companies were generating. Initially, the large-scale solution (around the size of a refrigerator) was a significant improvement in terms of data analysis performance compared to more general-purpose databases.

Netezza enabled organizations to analyze more data, faster. Yet Netezza didn't keep up with innovations in hardware and software and was late making the leap to the cloud. No investment in a technology roadmap and ever-changing guidance about End of Life (EOL) have introduced unacceptable risks for organizations dependent on this once-excellent technology. IBM tried unsuccessfully to fold Netezza into its suite of data products, eventually terminating support for the product – only to reverse itself with a half-hearted attempt at delivering a service in the cloud, leaving customers confused and insecure.

IBM NETEZZA FAILED TO KEEP UP

Netezza Pain Points

Originally a good solution when introduced, Netezza users now face three critical problems:

⚠ Netezza systems can't keep up with the avalanche of today's data volumes, nor can users expand these systems.

🚫 IBM's cloud offering for Netezza neutralizes most of Netezza's technical advantages and offers limited cloud benefits.

⊗ IBM's move to discontinue support for Netezza followed by an erratic series of product directions leaves organizations on a dead-end path.

As a result, most Netezza users need to find a new – and better – alternative.

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Netezza Options

Until recently, Netezza customers had only three options for moving forward, each with a set of challenges.

Options	Challenges
Limp along with a discontinued product	• Risky • Non-expandable, non-scalable • Doesn't address current business needs
Convert to an incompatible cloud data warehouse	• Data and integration migration is complex • Data privacy aand governance issues from multi-tenant offerings • On-premises data components do not fit well with cloud-only models • Cost prohibitive for always-on and mission-critical deployments • Cloud lock-in from single-cloud solutions • Shift from predictable CAPEX to highly unpredictable OPEX
Migrate to Netezza Performance Server for IBM CloudPak for Data	• Elimination of Netezza hardware-driven performance benefits • Complexity of managing RedHat Openshift • Not truly cloud-native: no elasticity • Uncertain roadmap from IBM

Netezza Users Need a New Path – One That Can Address Three Critical Goals:

1.

Modernize Analytics Systems

• Tear down analytics silos, focus on performance, and create standards-based analytics systems that fit with today's sophisticated data tools.

• Address modern demands on data volumes, mixed workloads, real-time analytics, and performance.

2.

De-risk the Cloud Journey

• Benefit from the agility and simplicity of the cloud, but without the exorbitant and unpredictable costs.

• Run workloads on any major public cloud, on-premises, or both, wherever it makes the most sense.

3.

Ensure a Painless Migration

• Netezza systems are inherently complex, with support for extremely large data sets, so migration plans for even a small number of workloads can be unwieldy as well as time and resource intensive; it does not happen overnight and is often high risk.

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The Ideal Next Step

Yellowbrick Data Warehouse, the only modern multi-cloud data warehouse, is the ideal next step for Netezza users.

The Yellowbrick cloud data warehouse retains the features, reliability, and predictability of mature enterprise data warehouses while offering compelling economics and price points suitable for today's large data volumes and complex business demands for fresher data, faster.

Yellowbrick achieves these objectives by delivering a highly efficient solution that results in a smaller footprint in the cloud and on-premises. Delivered as a service in any location, it is quick to deploy. It's elastically scalable, with true separation of storage and compute, more than meeting the extreme performance expectations of Netezza customers.

Yellowbrick: The Logical Enterprise Data Warehouse for Netezza Users

Yellowbrick delivers enterprise data warehouse functionality for business-critical needs on the scale necessary to reliably handle large workloads.

Ad Hoc Queries on Petabyte-size Data Sets
Yellowbrick's unique design enables it to deliver a rapid response to completely ad hoc queries on large data sets without any indexing, vacuuming, or cube building.

Sophisticated Workload Management
Yellowbrick guarantees that business-critical reports complete on time to meet SLAs for interactive users without disruption, unlike cloud-only or open source databases.

Real-time Data and Large Data Sets
Yellowbrick cost-effectively scales from terabytes to petabytes of data while still allowing real-time ingest of events for up-to-the-second analytics.

Mixed Workloads
Unlike cloud-only or single-server databases, Yellowbrick can easily juggle mixed workloads, including real-time feeds of hundreds of thousands of records per second, concurrent ETL processes, ad hoc queries, and batch processes without automatically resorting to additional scale and cost.

High Concurrency
Yellowbrick delivers high concurrency to thousands of users, with fast predictable response times.

Predictable Cost
Yellowbrick customers benefit from fixed predictable subscription costs in the cloud and on-premises which are a better transition from customers' existing CAPEX finance models.

Optimal Migration Strategy for Netezza Users

Not only is the Yellowbrick Data Warehouse an optimal replacement for Netezza users, meeting or exceeding the Netezza experience in many areas, but its simplified deployment and seamless integration make Yellowbrick easy and fast to deploy.

Simplified Deployment and Seamless Integration
Adopting Yellowbrick is easy and seamless with a SaaS-like offering across cloud and on-premises.

Simplified Deployment
Unlike other options, Yellowbrick integration partners can take full responsibility for the end-to-end project, from migration to implementation to service and support, significantly streamlining deployment.

Seamless Integration
Yellowbrick integrates seamlessly into existing systems, including business intelligence and data tools from Tableau, Denodo, MicroStrategy, and others.

Immediately Productive
Since its PostgreSQL-based front end is familiar to SQL users, business analysts are immediately productive while taking advantage of Yellowbrick's new, advanced capabilities.
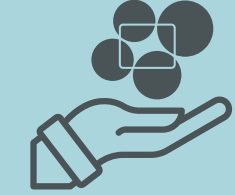
	Yellowbrick	Netezza
High software reliability and excellent support	✓	✗
Actively maintained database engine with a roadmap	✓	✗
Cloud data warehouse in your VPC	✓	✗
Elastic with separate storage/compute	✓	✗
Data stored on S3, no backups required	✓	✗
High concurrency, predictable latency for operational workloads	✓	✗
Workload management	✓	✗
Real-time streaming data ingest	✓	✗
High density, small footprint solution	✓	✗
Runs in AWS, your VPC	✓	✓
Runs on-premises	✓	✓
Autonomous without indexing/tuning	✓	✓
Scale without downtime	✓	✗
Built-in asynchronous replication for disaster recovery	✓	✗

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Yellowbrick Delivers the Goods

Yellowbrick Data has already helped many customers upgrade from Netezza to Yellowbrick's compatible, high-performant, and flexible platform for data warehousing. For example, Yellowbrick customer **TEOCO** found the Yellowbrick system not only faster than anything else the company evaluated but also able to load data without an impact on query performance.

Key Benefits from Yellowbrick:

$5 million in data center savings.

Significantly less operational overhead.

3-5x faster data loading of 40 billion rows of data.

Delivery of previously unavailable insights.

"In our testing of Yellowbrick, we compared the performance of a six-rack TwinFin to the 6U baseline Yellowbrick system. And performance was anywhere from 3 to 50 to 100 times faster."

RICK MAHUSON
Vice President, R&D Business Analytics, TEOCO

Yellowbrick Delivers the Goods

Symphony RetailAI replaced five full-rack Netezza systems with six 6U Yellowbrick appliances running mixed workloads of batch reporting, dynamic real-time reporting, real-time queries, and generation of analytics cubes.

Key Benefits from Yellowbrick:

3-5x better price/performance.

2x faster reports with 10x larger data sets.

3-5x faster cube builds and queries.

Faster delivery of insights to customers.

Rapid migration with minimal code rewrites.

"With Netezza, we had to move a copy of our data up to the cloud before customers could access it and often ran into synchronization issues. With Yellowbrick, we can now keep all that data in one place. We're delivering new insights to customers up to 12 hours faster each week by avoiding the need to move hundreds of gigabytes of data up to the cloud before it can be queried."

NIGEL PRATT
Senior Vice President, Development, Symphony RetailAI

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Top 10 Mobile Operator's Explosive Data Growth Puts Business at Risk

Challenge

A worldwide top 10 mobile operator in Latin America was struggling with explosive growth in data volume while trying to find a way to migrate off Netezza. Profitability depended on insights from billions of daily records for telecommunications services delivered to millions of mobile users and business customers.

Existing Platform

The company relied on the IBM Netezza data warehouse to store and analyze customer data. But an 800 percent growth in data volume made it difficult to meet business and user demands, and IBM's end of life and end of service for Netezza appliances made it risky to stay on the Netezza platform.

Specifics

- Netezza struggled to process more than 1 billion records per day.
- Query latency grew longer.
- System availability became highly unreliable.
- IBM's discontinuation of Netezza required the company to create a migration strategy.

Millions of Dollars at Risk

The company faced significant problems delivering accurate and timely billing reconciliation for prepaid mobile cards, which put millions of dollars at risk, created the potential for negatively impacting customer and partner experiences, and reduced its ability to manage costs, expenses, and revenue structures.

Extensive Evaluations and One Clear Winner

Evaluations

The company did extensive evaluations and testing of new data analytics platforms from established suppliers and newer companies.

Results

- Most platforms showed only modest performance improvements.
- Some introduced risks during migration, data load, and systems portability.
- Many solutions required a coalition of system integrators and tool suppliers to deploy, adding complexity, time, and costs.

One Clear Winner

The Yellowbrick Data Warehouse solution was the clear winner. It was superior to other platforms in the following ways:

Performance at scale.
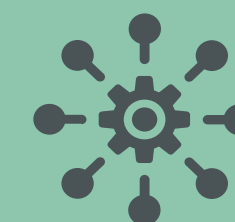
Compatibility with existing tools.

Ease of use.

The mobile operator deployed Yellowbrick Data Warehouse to replace Netezza.

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The Business Impact of Deploying Yellowbrick for Telecommunications

The business impact of migrating from Netezza to Yellowbrick Data Warehouse was immediate. The operator can now analyze much more data faster to improve business across the board.

Yellowbrick not only made billing reconciliation faster and more accurate, but it also enabled previously impossible insights, including:
- Marketing can reduce churn by targeting high-value subscribers and upselling new services.
- Operations can minimize infrastructure utilization.
- Risk management can analyze more historical data to improve fraud detection.

The Financial Impact

Cost Savings
- Data center footprint reduced.
- Netezza: several racks.
- Yellowbrick: 10U system.
- > 20-fold reduction in rack space.
- Estimated savings: several million dollars in data center costs per year.

Millions of Dollars of Risk Eliminated
Millions of dollars per month are no longer at risk, thanks to more accurate billing. Yellowbrick provides the information needed in real time to validate revenue and reconcile payments to retailers for prepaid mobile cards.

Migration to Yellowbrick Enables New Opportunities

Eighteen months after migrating from Netezza, the operator has found Yellowbrick to be the most flexible, reliable turnkey solution platform it evaluated and has experienced virtually no downtime.

Yellowbrick Enables Future Revenue Opportunities
The operator is exploring new ways that it can use Yellowbrick to monetize data via value-added services, such as location-based analytics and IoT services it can provide to banking, government, retail, and other business customers.

Yellowbrick as a 5G Enabler
The move to 5G will generate a 10-50x increase in data volume (up to several petabytes) for the operator. Yellowbrick will enable the operator to use that data to provide the best possible quality and customer experience.

"Game-changing technologies like Yellowbrick do not come around often. Our customer was blown away by the impact the Yellowbrick solution has had on its business."

VICTOR NAVARRO
Managing Director and Founder, Appliance Technologies
Yellowbrick Implementation Partner

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Netezza Migration Summary

Struggling with significant data issues, the company's replacement of Netezza with Yellowbrick makes a massive business impact.

Challenges
- 800 percent growth in data impacting real-time insights into business and customer experience.
- Slow queries and limited access to historical data.
- Dealer mobile card commission and reconciliation issues.
- Limited real-time visibility into mobile card use and payment.
- High data center costs.
- Inability to prepare for the transition to 5G.

Solution
- Replacement of Netezza with Yellowbrick Data Warehouse.

Results
- Improved customer experience and higher customer satisfaction.
- 20x faster query execution, even during ingest.
- 8x more data (billions of rows) ingested daily.
- Millions of dollars per month are no longer at risk, thanks to more accurate billing.
- Several million dollars in data center savings per year.
- Data analytics readiness for supporting 5G-ready infrastructure.
- New value-added services opportunities including location-based and IoT services for business customers.

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Yellowbrick Hybrid Cloud Data Warehouse is the Optimal Replacement

Yellowbrick meets or exceeds the Netezza experience in many ways.

PostgreSQL Compatibility

- Yellowbrick maintains compatibility with PostgreSQL and adheres to the ANSI SQL standard to provide a quick and easy migration from Netezza. To make the transition even easier, Yellowbrick has added functions similar to Netezza.

Support for Stored Procedures

- Yellowbrick supports PL/pgSQL stored procedures that allow customers to easily port from Netezza.
- Yellowbrick allows for on-premises, off-premises, and cloud deployments.
- Yellowbrick's native support for hybrid cloud provides Netezza customers with a deployment strategy that can span any mixture of off-premises and on-premises options.

Peak Performance in a Small Footprint

- Yellowbrick's revolutionary new architecture dramatically reduces footprint size. Some Netezza customers have seen solutions shrink from six full data center racks to just six rack units (12 inches in size).

Workload Management

- Yellowbrick provides sophisticated workload management capabilities that allow administrators to assign priority to users and workloads to guarantee that SLAs are met.

Utilities

- Yellowbrick delivers utilities that meet or exceed Netezza's utilities.

Fast, Simple Installation

- Yellowbrick hybrid cloud data warehouse systems install in less than a couple of hours and can be production ready in less than a day.

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Yellowbrick is Easy to Try, Easy to Deploy

With Yellowbrick, there are no complex strategies required to migrate data away from Netezza. Yellowbrick offers prospective customers the ability to test workloads on a live system as well as conduct a proof of concept (often remarkably fast) at the customer site before purchase. Yellowbrick can migrate all of an organization's data in just days or weeks on-premises, with a variety of benefits.

Slash Operational Costs

Just like Netezza, Yellowbrick is a self-contained database system, but even more compact, simple, and integrated. There's no need to provision storage or maintain file systems. No need for network administration. No operating systems to install. It's simple but powerfully effective.

Increase Reliability

The Yellowbrick hybrid cloud data warehouse has an all-flash architecture to maintain system reliability, so there are no spinning hard drives to break or replace.
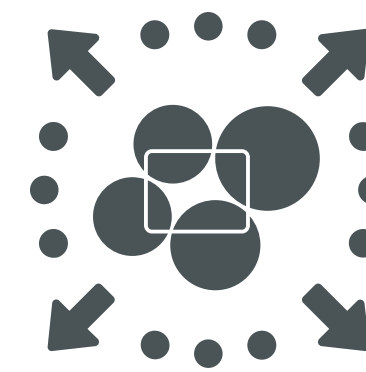
Make DBAs' Lives Easier

Yellowbrick doesn't require indexes, cubes, vacuuming, or grooming. Many databases can run on one system, so DBA resources can be spent on adding value, not doing maintenance.

Expand on Demand

Yellowbrick supports on-the-fly expansion. Customers can simply add new blades to the Yellowbrick system in seconds – the system will automatically make the new compute and storage capacity available.

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Accelerated Migration with Purpose-built Tools

Yellowbrick has a broad ecosystem of partners with tools that can significantly speed your data migration from Netezza to Yellowbrick.

Next Pathway is an automated cloud migration company. Its SHIFT Migration Suite automates the end-to-end challenges customers experience when migrating applications to the cloud.

CompilerWorks was founded with the idea of applying compilers and optimizers to new application areas, helping customers with one of the most challenging and fundamental tasks in computing: language design and implementation.

Systech provides end-to-end digital strategy, data engineering, and advanced analytics services to build data-driven capabilities into clients' core business operations to drive continuous growth.

Painless, Low-cost Option for Modernizing Your Analytics System

1. Modernize

- Analyze all workloads of both structured and unstructured data, including JSON, Parquet, and XML.
- No mirroring needed.
- No data grooming or vacuuming required.
- Simplified management.
- Seamless integration: Yellowbrick is 100 percent ANSI SQL-compliant; existing applications and third-party tools integrate seamlessly, and data analysts can use the solution right out of the box.
- Hands-on support from Yellowbrick experts.
- Future-proof your data warehouse environment with massive scale, support for thousands of concurrent users, and easy migration to the cloud.

2. De-risk the Cloud

- Upgrade straight to cloud or on-premises, providing an easy on-ramp to cloud.
- Significantly reduce footprint and reduce data center costs.
- No forklift upgrades or proprietary racks required.

3. Easy Migration

- Easy deployment: Yellowbrick can be production ready in hours.

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Begin Your Modernization Journey Today

Contact Yellowbrick to get more information on your Netezza migration plan and start to modernize your data warehouse environment today at the pace your business needs.

www.yellowbrick.com/netezza