

Netezza expands beyond data warehouse appliances and heads toward analytic appliances

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Sector: Enterprise Software

Netezza has shifted its focus to analytics with a data warehouse appliance being one system in a range of analytic appliances it now plans to deliver. In effect, the company wants to move analytic functions currently handled at the application level, for example, into the database within a Netezza box. Developing analytic algorithms, which will enable it to move beyond handling SQL-based data sets to C, C++ and Java, is now under way. The Netezza Developer Network is a group of 30 or so organizations, including analytic software vendors, government bodies, financial services firms and academic institutions that are writing and testing the algorithms – although Netezza does plan to develop some itself. Release 4 is the latest out of the door. A software-only upgrade, its principal aim is to double the query performance provided by the Release 3 predecessor.

Netezza reported its first quarter as a public company in late August, in which sales for the second quarter of fiscal 2008 jumped 60% to \$28.4m and sales for the first half of fiscal 2008 rose 80% to \$53.7m. Sustained profitability is still, however, elusive, although management expects it to reach GAAP profitability in its fourth quarter time frame.

IMPACT ASSESSMENT

The message

Having championed the data warehouse appliance, Netezza is now broadening out into analytic appliances with the aim of bring its price/performance message to analytics.

Competitive landscape

We're unsure as yet whether the move to deliver analytic appliances will change the vendors Netezza competes against. But we believe it will serve to further differentiate the company in a crowded market. Newer data warehousing entrants include HP, Calpont, Vertica Systems, Dataupia and Paracel. IBM, Oracle and NCR's soon-to-be-spun-off Teradata data warehouse division are the main incumbents. Datallegro, Sun/Greenplum, Sybase and Microsoft are the main other players in this sector.

The 451 Assessment

While other data warehouse appliance vendors have moved down the commodity hardware route, Netezza continues to deliver purpose-built systems from the ground up, contending that control of the entire technology stack is the right way forward. However, we would like to see it move into sustained profitability, which would further validate this strategy. Broadening out the application of its appliances for analytics seems like a sound move that will engender more sales opportunities as well as bring it differentiation.

Context

In late August, Netezza reported its first quarter as public company, in which sales rose 60% to \$28.4m in second quarter fiscal 2008 against the same period a year ago. Revenue for the first half of fiscal 2008 jumped 80% to \$53.7m. The numbers also showed that the company is narrowing its losses. For second quarter fiscal 2008, Netezza reported a net loss of \$1m compared with \$1.9m in the same quarter a year ago. Net losses for the first half of fiscal 2008 were \$2.9m, compared with \$6m for the equivalent period in fiscal 2007. Management expects GAAP profitability to be reached during its fourth quarter time frame.

Netezza added eight new accounts in its second quarter and now has 109 customers. The game plan going forward is to add between six and 15 new accounts per quarter. Several uncharacteristically large deals during the second quarter pushed its average deal size up to \$2.3m. But the expectation is that average deal sizes will, in general, remain around the usual level of \$1m.

Netezza now has 243 employees and plans to continue to invest in all areas of the organization. The size of its headcount is partly due to the fact that it sells direct in virtually all geographies. Management also plans further investments in Europe, Middle East and Africa and Asia-Pacific.

Strategy

Netezza has shifted its positioning from a data warehouse appliance vendor to one that sells analytic appliances with a data warehouse appliance being one in a series of forthcoming analytic appliances. The idea behind the analytic appliances is to take processing tasks currently performed outside of a warehouse – at the application level or by a cluster of servers, for example – and move them inside the database within a Netezza box.

The move also means that Netezza boxes will be able to handle analytics on data sets that are just SQL-based – as is the case today – but are written in C, C++ or Java, for example.

The technical lynchpin behind the analytic appliances is the new range of algorithms the boxes will be able to handle. Netezza plans to develop some itself while others will be developed by partners and consulting companies.

Netezza has also set up a Developer Network – a group of about 30 organizations including academic institutions, government bodies, financial services firms, commercial vendors and consultancies that are writing and testing algorithms for the new analytic appliance range. Members include **Carnegie Mellon University, SAS Institute, SPSS, NetMap Analytics, Multi-Threaded** and **Epsilon**. Initial analytic algorithms will be available in C code with other programming languages supported over time.

Real-time 'fingerprinting' for detecting criminal activity, geo-spatial analysis and predictive model scoring for real-time marketing efforts are some of the analytic use cases executives envisage for the analytic appliances.

Products

Release 4 is the latest version of its data warehouse appliance software. It's delivered as an operating system update that runs on all generations of Netezza hardware including current NPS 10000 range, which starts at a half rack system for about 1TB of data and moves up to an 8-rack system with a maximum 100TB capacity.

Management claims Release 4 software doubles query performance over Release 3. Part of the improvement in performance comes from the 15 or so optimized algorithms inside Release 4 to improve performance of workloads and handle a larger set of mixed workloads as well as new optimization for pre-processing different types of queries.

Release 4 also sports expanded backup and restore features through support of a standard industry API. The game plan is to provide formal certification for a number of third-party backup and restore tools, starting with **Veritas' Symantec** NetBackup tool, which is now available.

Improved query history monitoring is another enhancement in Release 4 designed to enable administrators to see what workloads are running for capacity planning purposes. Load continuation functionality is the other main area of improvement. It means that if there is a disruption in loading data into the appliance, administrators no longer have to restart the load from scratch but have a check point from which the system automatically restarts.

Competition

Netezza's management contends that it sees **Oracle** the most frequently of all data warehouse players in competition since it is the incumbent in the bulk of competitive situations. Aside from latest 11g-based warehouse software, Oracle has hardware partnerships with a number of players, including **Dell** and **EMC** under the Oracle Information Appliance Foundation, although Netezza hasn't reportedly competed against any Oracle-based warehouse appliance so far.

Teradata and **IBM** are the vendors Netezza reportedly tends to bump up against most frequently, aside from Oracle, which makes sense, since like Oracle, they are established incumbents in data warehousing. Teradata is seen in retail deals in particular, according to management, which we would expect given Teradata's established beachhead in this sector. IBM introduced an expanded range of warehouse appliances dubbed Balanced Warehouses in March in addition to its more traditional software-only DB2-based Data Warehouse Edition. Netezza sees IBM Balanced Warehouses in bake-offs, although the incumbent package tends to be Data Warehouse Edition.

Microsoft SQL Server is only reportedly encountered as an incumbent offering, not a challenger in bake-offs. **Sybase** IQ never shows up in deals, and **Greenplum**, which offers its MPP-based version of PostgreSQL on **Sun** hardware as a warehouse appliance, is only seen occasionally, according to executives. **Datallegro** is seen frequently in deals, although management contends it has a high win-rate against it.

Of the newer entrants into the warehousing arena, **HP** – with its NeoView warehouse – is the only player to show up in bake-offs so far, according to management. **Vertica Systems** and **Calpont**, however, may appear in the future, given that their respective column-based databases for warehousing are yet to ship. **Paracel**, which has now repositioned from a SQL Server query accelerator to a column-based database available as a warehouse appliance through hardware partners, a software-only warehouse and a query accelerator, could also appear on Netezza's competitive radar in future.

Dataupia is playing in a slightly different market in that its warehouse appliance is designed to coexist with existing Oracle, IBM or Microsoft-based warehouses – not replace them, as is the case with Netezza NPS systems – which could be the reason Netezza hasn't seen Dataupia in deals so far.

SWOT ANALYSIS	
Strengths	Weaknesses
The introduction of analytic appliances will serve to differentiate Netezza in the crowded data warehousing sector and open it up to new sales opportunities.	Continued losses – although they are narrowing – will fuel criticism that its direct sales model and decision not to pursue a more commodity hardware route are costing it dear.
Opportunities	Threats
Analytic appliances will broaden the types of analysis handled by a Netezza box and no doubt generate new types of analytics made possible by the price/performance message Netezza continues to espouse.	Although its public status undoubtedly gives it a leg up, the data warehousing sector continues to attract new entrants at a heady pace with the latest wave of competition coming from column-based database startups Vertica, Calpont and Paracel.

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