

MICROSTRATEGY 9: BREAKTHROUGH TECHNOLOGY THAT SUPPORTS THE FULL RANGE OF BI APPLICATIONS FROM WORKGROUP BI TO ENTERPRISE BI

MICROSTRATEGY'S BIGGEST RELEASE IN NEARLY A DECADE, MICROSTRATEGY 9 FEATURES SIGNIFICANT NEW PRODUCTS AND MAJOR ARCHITECTURAL EXTENSIONS TO HELP COMPANIES SEAMLESSLY EXTEND BI FROM SMALL, INDIVIDUAL APPLICATIONS INTO A COHESIVE ENTERPRISE BI OPERATION

MICROSTRATEGY 9 DELIVERS EXCITING NEW TECHNOLOGY AND CAPABILITIES DESIGNED TO:

- INCREASE THE SPEED AND SIMPLICITY OF DEPLOYING NEW BI APPLICATIONS AT THE WORKGROUP LEVEL
- EMPOWER BUSINESS USERS AND DEPARTMENTS WITH MORE POWERFUL SELF-SERVICE CAPABILITIES
- EXTEND THE SCALE, PERFORMANCE, AND EFFICIENCY OF BI AT THE ENTERPRISE LEVEL
- SUPPORT THE SEAMLESS EVOLUTION FROM WORKGROUP BI AND DEPARTMENTAL BI TO ENTERPRISE BI

Companies today are challenged with escalating demands for more business intelligence (BI) across their enterprises. Most organizations require a strategy that can support enterprise, departmental, and workgroup BI initiatives to balance the need for enterprise-wide consistency with nimble responsiveness to individual group and department BI requirements. MicroStrategy 9, MicroStrategy's most feature-rich release in nearly a decade, offers new products and major platform enhancements that help companies seamlessly extend BI from small, individual applications into a cohesive enterprise BI operation.

MicroStrategy 9 offers significant technical advances, including Multi-source ROLAP, In-memory ROLAP, new personalized report distribution services, new reporting capabilities, new dashboard capabilities, a dramatically streamlined user interface, and new technical features that extend the performance and scalability of the platform beyond its already high levels.

Multi-source ROLAP

MicroStrategy has added a new "multi-source engine" to its ROLAP architecture that enables its unified, multi-dimensional model to now span multiple database sources, including data warehouses, data marts, operational databases, and

departmental databases. The new multi-source capability is a seamless extension to MicroStrategy's ROLAP architecture and its use is completely transparent to both end users and report designers.

Supports Departmental BI by Providing Access to More Data, Faster

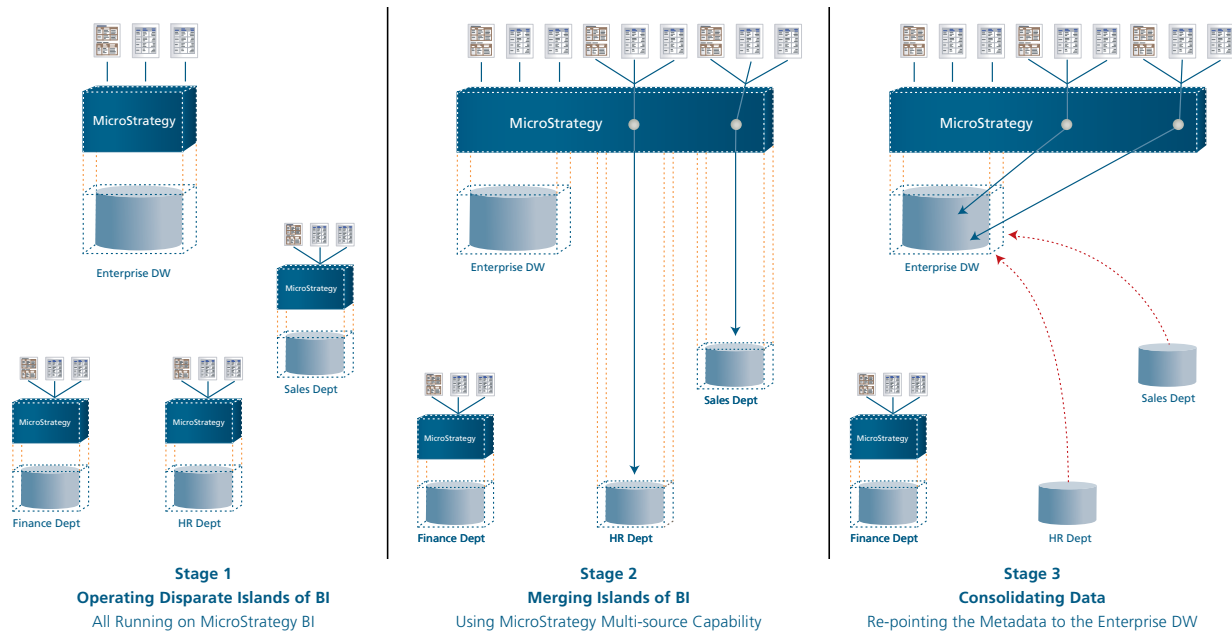
Multi-source ROLAP helps departments connect their BI software to many more databases, without incurring the cost and administration of physically moving the data into a data warehouse. Without Multi-source ROLAP, departments would need to obtain ETL technology to move the data into a warehouse or a data mart. With MicroStrategy 9, departments can significantly reduce the time to move data by weeks or months and the technical work can be accomplished by BI architects, rather than requiring extra technical assistance from DBAs or ETL engineers.

Supports the Gradual Evolution from Departmental BI to Enterprise BI

MicroStrategy's Multi-source ROLAP engine offers an evolutionary path that allows companies to migrate departmental BI installations gradually from disparate departmental islands of BI into a fully integrated and unified enterprise BI architecture. In the first stage, companies with disparate islands of BI based on MicroStrategy technology can be integrated into a multi-source environment, leaving

FASTER DEPLOYMENT OF WORKGROUP BI APPLICATIONS

MicroStrategy 9 Supports the Gradual Evolution from Islands of BI to Enterprise BI



data in their disparate departmental databases, but merging metadata and reports into a single, unified BI layer. In the second stage, the departmental data can be moved from the departmental databases into the more unified data warehouse. As the departmental data is moved into the data warehouse, the MicroStrategy multi-dimensional model can simply be “re-pointed” to the data’s new database source, and all reports and dashboards will continue to run without change.

Less Expensive Database Capacity for High-efficiency Enterprise BI

Companies can also use Multi-source ROLAP to get more capacity from their expensive database engines by offloading simple queries from high-end, high-cost database servers onto much less expensive, general-purpose databases. The MicroStrategy engine will automatically use the inexpensive database whenever it can, reserving the high-end database capacity for high volume queries.

In-memory ROLAP

An extension to its existing ROLAP architecture, MicroStrategy’s new In-memory ROLAP is designed to take advantage of the immense amount of addressable memory now available with the newest 64-bit operating systems, including Microsoft Windows 64, IBM AIX, HP-UX, Sun Solaris, Red Hat Linux, and SUSE Linux. In-memory ROLAP technology uses the extensive memory space available in 64-bit servers as “multi-dimensional memory” in which both data and calculations can reside as multi-dimensional datasets called “ROLAP cubes.” MicroStrategy reports and dashboards automatically direct queries to In-memory ROLAP cubes whenever possible, which provides much faster query performance as compared to database-resident storage. In-memory ROLAP is engineered to improve the overall

performance of a BI system, especially with complex queries that take excessive time to process or when accessing a very large database where queries are burdened by the database size.

Engineered to be Simple and Transparent

In-memory ROLAP operates seamlessly within the MicroStrategy ROLAP architecture and its usage is completely transparent to users and report developers. Report developers can create reports using MicroStrategy metadata objects irrespective of whether the data underlying the metadata might, at some time, reside within a ROLAP cube as well as in the databases. When each report is run, the MicroStrategy engine dynamically determines whether the report’s data can first be obtained from a ROLAP cube. If not, the MicroStrategy engine will get the data from the databases.

Supports Workgroup BI with Fast and Easy Set-up

In-memory ROLAP technology is ideal for small workgroup BI applications, with little upfront effort and no need for ETL technology or a decision support database. In-memory ROLAP cubes can be populated quickly and easily from any database source or even from a spreadsheet. Once the data resides inside an In-memory ROLAP cube, it can act as a source of reusable definitions and data for many reports, dashboards, and even OLAP investigations by workgroup users. As workgroup-level BI applications mature and grow beyond the size of an In-memory cube, companies can put the data into a proper relational database and use MicroStrategy’s full ROLAP capability to model and access the data.

Delivers High Performance with Fewer Servers

With In-memory ROLAP, organizations can eliminate a large amount of repetitive and expensive processing that would normally burden the database servers. By creating In-memory

ROLAP cubes for the most expensive and time-consuming queries, the database engine will process these queries only once to form the various ROLAP cubes, instead of each time a report is run. The ROLAP cubes can be formed overnight during off-peak hours, thus freeing up database capacity during the peak interactive hours of the day, allowing the databases to be sized just enough to service ad hoc analyses and less frequent reports. By offloading the database server with In-memory ROLAP cubes, companies can deliver faster performance, deliver more reports per hour, and free up capacity on the database servers for additional users and additional BI applications.

Faster, Friendlier Web User Interface

MicroStrategy 9 delivers a re-engineered Web user interface that is faster, more powerful, and more personal than ever before. The new MicroStrategy 9 Web architecture boasts a wide range of performance-enhancing changes that make the user interface more interactive and more instantly responsive to user requests. In addition, the user interface includes a powerful array of self-service features that give the user extensive control over the reports, formats, and data they see, without requiring IT support to make changes; and all without requiring a business user to learn how to design a report.

MicroStrategy 9 gives its Web-based business users the ability to reformat reports using autostyles, graph control, font control, title control; change the arrangement of data on reports by pivot, page-by, and sorting; and change the analytics on reports using subtotals, time transformations, row calculations, and column calculations. Most empowering is the ability for business users to seamlessly transform the content in their reports by using ROLAP's

powerful "drill-anywhere" capability that lets users browse the full depth and breadth of a database.

New Dynamic Dashboard Features and Design Capabilities

MicroStrategy's dynamic dashboards have been significantly enhanced to contain even more information, and more interactivity and analytical richness. With an expanded library of advanced visualizations along with dynamic selector controls, users can encapsulate the data from a dozen or more grid or graph reports into one dashboard.

With MicroStrategy 9, the dynamic dashboards inherit full OLAP drilling capability that is automatically enabled directly on the dashboards, allowing users to perform OLAP investigations directly on the grids and graphs, and minimizing the need for IT to develop and maintain additional reports for investigation.

Additional MicroStrategy 9 dashboard enhancements include:

- Any HTML-accessible content can be included directly on the dashboard, such as real-time stock tickers
- Multi-layout documents allow users to easily combine several independent dashboards into a single convenient "dashboard book." This allows users to put all of their frequently-used dashboards into a dashboard document that can be viewed throughout the day.
- Smart placement assistants automatically size and position items on a dashboard
- New visual design cues placed directly on the dashboard template eliminate the need for many pull-down menus
- A library of new autostyles can be applied to format the entire dashboard consistently
- New out-of-the-box dashboard templates provide structured starting points for novice dashboard designers



MicroStrategy Dynamic Enterprise Dashboard

MicroStrategy Distribution Services

MicroStrategy Distribution Services is a major new component of the MicroStrategy platform architecture designed for high-volume and high-efficiency distribution of reports and dashboards with very low IT administrative overhead. Distribution Services is fully integrated within the MicroStrategy Intelligence Server, thereby inheriting all of its administrative and operational efficiencies, as well as inheriting the Intelligence Server's ability to run in true 64-bit mode on a range of operating systems, including Microsoft Windows 64, IBM AIX, HP-UX, Sun Solaris, and Linux from Red Hat and SUSE.

With MicroStrategy 9, business users can take complete control of their information flow. MicroStrategy 9 allows users to personalize their report distributions by freely selecting:

- Distribution Format: HTML, Flash, PDF, or Excel
- Distribution End-point: E-mail, Networked Printers, File Server (including Portals and PCs), or their MicroStrategy report archive

Distribution Services allows business users to set up information flows for themselves and for their co-workers without having to go through a centralized IT administrator, as is common with other BI technologies. Business users can set a variety of report distribution triggers, including Send Now, Time-based Schedules (e.g., every Monday morning), Event-based Triggers (e.g., when the books are closed), and Alert-based Triggers (e.g., if inventory levels drop 10% below normal). While schedule-based distributions are common in the BI industry, event-based triggers

and alert-based triggers are far less common and empower the users to see reports only when they need to look at the data.

With MicroStrategy 9, business users can further personalize and automate their BI environment by setting up their own personal alert conditions for their alert triggers. Using Distribution Services, business users can have their own personal information radar that automatically scans the databases for their own exception conditions.

New Enterprise Reporting Features

MicroStrategy 9 includes a series of new features that allow its Report Services module to be used for complex enterprise reporting and customer statements. Report Services already contains a host of features for enterprise reporting, including automatic hierarchical report organization, comprehensive conditional formatting, and Pixel Perfect™ layout that is equally as precise on screen as it is in print. With MicroStrategy 9, Report Services has been extended to include additional automatic formatting features, such as horizontal repeating sections, dynamically-selected images, vertical text layout, multi-layout reports, automatic table of contents generation, automatic pagination, and watermarks.

Complex Report Designs Without Programming

MicroStrategy 9 supports the most demanding enterprise reporting and customer statement applications because it is entirely metadata driven and does not require programming, as is typical of most other BI technologies that address these same requirements. As a result, MicroStrategy enterprise reports and

customer statement applications are quick to develop and easy to change and maintain over time.

High Performance SQL Engine

MicroStrategy 9 introduces several powerful new features that deliver even faster performance at high levels of scalability. MicroStrategy is a leader in SQL generation with its patented ROLAP-based SQL generation engine that employs the most sophisticated features of dynamic SQL generation, including customized SQL for each major DBMS technology, collaborative analytics, Very Large Data Base (VLDB) settings, aggregate awareness, and multi-pass SQL capability.

MicroStrategy 9 features a new level of SQL optimization designed to better optimize multi-pass SQL generation. Tests with real data warehouses and reports have shown dramatic improvement with MicroStrategy's new SQL optimization, with as much as a 55% query time reduction for complex queries.

TO LEARN MORE ABOUT MICROSTRATEGY 9 AND THE NEW PRODUCTS AND ENHANCEMENTS THAT HELP COMPANIES SEAMLESSLY EXPAND THEIR BI ENVIRONMENTS, CALL 1-888-537-8135 OR VISIT <http://www.microstrategy.com/9>

