

Teradata

Enabling Microsoft Excel PivotTables / BI Connectivity for Teradata via a Standards-based ROLAP / MDX Provider

Product

Custom ROLAP / MDX Provider for Teradata

Customer



Key Customer Requirements

- Microsoft Excel PivotTable connectivity / OLAP-based BI application connectivity
- Direct data connectivity leveraging performance, features and functionality of Teradata Aggregate Join Indexes (AJIs)

About Simba ROLAP Solutions

Simba is the leading independent expert in MDX query language and ROLAP data connectivity. Simba's ROLAP Solutions allow relational database vendors to offer standards-based, multi-dimensional BI and performance management data connectivity to their customers. Simba's ROLAP Solutions build upon an ISV's proprietary technology and database optimizations to deliver easy-to-use, maintainable, highly scalable and performance-oriented data connectivity from any standards-based, multi-dimensional BI application. Contact Simba for more information.

About Simba

Simba Technologies Inc. is the recognized world leader in standards-based data access products and solutions. Simba works with leading companies globally to deliver first class data connectivity solutions. Simba is an industry pioneer in relational and multi-dimensional data connectivity, and MDX query language technology. For more information, visit www.simba.com.

“*Simba's data connectivity expertise and technology made it possible for Teradata to provide direct Microsoft Excel PivotTables access to the Teradata database. Teradata customers can now use popular and familiar OLAP-based applications, like Excel PivotTables, to directly access a single view of their data in real-time within a ROLAP environment. The Simba solution delivers full and high performing capabilities meeting the robust enterprise requirements of our customers.*”

- VP, Teradata Product & Portfolio Management

Teradata Corporation (www.teradata.com) is the world's largest company solely focused on data warehousing and enterprise analytics. For over a quarter of a century, Teradata has been at the forefront of the data warehousing marketplace, continually redefining and extending the possibilities of this rapidly evolving field. Teradata's data warehousing technology provides a single view of an enterprise in real-time. In addition, Teradata offers business intelligence analytics that help its customers use data in imaginative ways to gain maximum value.

Teradata's database allows users to better analyze business operations and drive smarter, faster decisions – providing users with a scalable, single view of their business. The Teradata database is renowned for its speed and parallel processing capability.

Teradata wished to offer direct Microsoft Excel PivotTable and PivotChart connectivity to its Teradata database customers. Because PivotTables and PivotCharts rely on an OLAP-based data connection using the MDX query language, Teradata needed to implement a

ROLAP data provider for its database to enable the desired direct Excel connection. An open standards-based ROLAP data provider would also allow Teradata to support additional OLAP-based BI applications, providing its customers with access to an entirely new class of application for querying, analyzing and reporting on data. The key for interoperability was the use of the MDX query language, which is the standard OLAP query language used by companies such as Microsoft, Oracle and SAP BusinessObjects.

Teradata's ROLAP solution would need to meet Teradata's incredibly high performance standards. Similarly, the solution would need to be extremely scalable and leverage Teradata's database optimizations, such as use of Aggregate Join Indexes (AJIs), to deliver performance in-line with Teradata's renowned database solution.

The Solution

To attain the connectivity, Teradata chose to use commercially available technology. It approached Simba to build a custom ROLAP data connectivity solution for the Teradata

Excel BI Connectivity Options for Data Warehouse Vendors:

Option 1

One option entails using a third-party, mid-tier server. However, using a mid-tier server requires loading data into another product, adding to the complexity and cost of the solution, while often degrading its overall performance. Using a mid-tier server could adversely affect scalability, and work against a database vendor's proprietary technologies and optimizations. This would greatly reduce the purpose and performance a database vendor's customers gain from using an optimized database solution. It also would not provide direct Excel PivotTable and PivotChart connectivity.

Option 2

Another option entails using open source data components. However, open source data connectivity components provide limited or no support for some key BI applications, as well as some critical Excel BI functions. Furthermore, investment in and support for open source products typically is not at the same level as commercially available solutions.

Option 3

A third option entails using commercially available data connectivity technology. Commercially available technology typically follows a predictable product roadmap, provides more features and functionality than open source products, provides access to dedicated support resources, and garners continued investment from the technology vendor to ensure compliance with the latest advancements in the MDX query language. This option can provide high-performance, direct Excel BI connectivity.

The Simba MDX Advantage:

- ✓ MDX 2005 query language compliant
- ✓ Provides industry standard BI connectivity
- ✓ Supports sub-queries
- ✓ Supports function-shipping
- ✓ Supports Microsoft Excel 2010
- ✓ Supports Microsoft Excel 2007
- ✓ Supports Microsoft Excel 2003
- ✓ Supports Microsoft Excel XP
- ✓ Support for multiple BI clients
- ✓ Includes OLE DB for OLAP (ODBO) interface
- ✓ Includes XML for Analysis (XMLA) interface
- ✓ Two-tier deployment option
- ✓ Three-tier deployment option
- ✓ No mid-tier needed
- ✓ Highly scalable
- ✓ High-performance
- ✓ In-database analytics
- ✓ Easily customized
- ✓ Fully leverages an underlying data store's proprietary technologies and database optimizations

Simba built a custom MDX / ROLAP solution for Teradata leveraging the specialized performance, functionality and scalability that make Teradata a data warehousing leader. Simba provided a thin data connectivity solution that seamlessly integrates into the Teradata database – easily manageable and fully optimized – for direct connectivity from applications like Microsoft Excel BI to Teradata data.

database, called the Teradata OLAP Connector (see figure 1), that would enable the direct Microsoft Excel and OLAP-based application connectivity it desired. Teradata chose Simba because of Simba's reputation as the leading independent expert in Microsoft Excel connectivity and MDX / OLAP technologies.

The ROLAP data connectivity solution Simba delivered to Teradata provides direct and native Microsoft Excel PivotTable and PivotChart connectivity for Teradata's customers, in addition to wider support for connecting other MDX / OLAP applications to the Teradata database. No mid-tier server is needed. The solution makes optimal use of Teradata's powerful in-database analytics, data aggregations and calculations, and scalability to deliver versatile and potent multi-dimensional functionality and data connectivity to Teradata's customers.

Direct, native Excel connectivity to the Teradata database means that Teradata's customers do

not have to load data into a mid-tier server to gain access from Excel PivotTables. Data stays in the Teradata database, providing hot connectivity, optimal performance and one version of truth reporting. The solution uses Teradata's security for user authentication and authorization. It's also completely scalable. Teradata's customers are able to utilize the full performance of their Teradata solution, connecting directly from Excel.

By using commercially available technology from Simba, Teradata was best assured that its Excel connectivity solution would support the latest Excel PivotTables BI functionality from Microsoft. Similarly, Simba's open, standards-based data connectivity technology would support other key BI applications, enabling Teradata to offer wider MDX / OLAP BI connectivity to its customers. Simba's continued investment in the technology would ensure future connectivity and compatibility for Teradata with the next generation of MDX / OLAP BI applications for years to come.

The Teradata OLAP Connector enables direct, multi-dimensional query connectivity to data stored in the Teradata database. The solution makes data available for deep, multi-dimensional BI analysis. Most importantly, the solution fully leverages Teradata's technologies and database optimizations – such as its AJOs – which are vitally important to Teradata's performance and strength for which its customers choose its product.

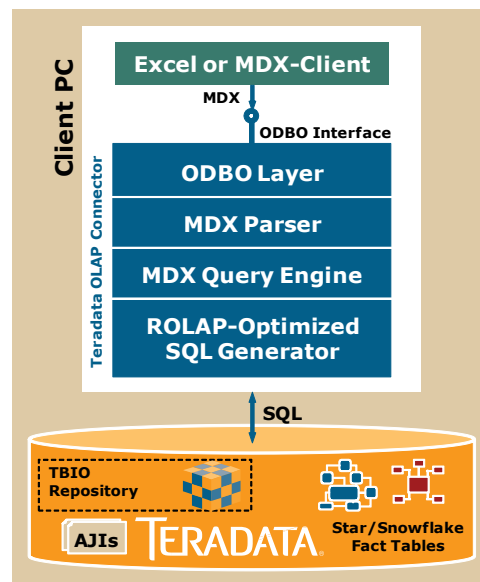


Figure 1: Teradata Solution

Printed in Canada

Simba Technologies Inc. | 938 West 8th Avenue | Vancouver, BC V5Z 1E5 | Canada

Tel: +1 604 633 0008 | Fax: +1 604 633 0004 | solutions@simba.com | www.Simba.com

©2010 Simba Technologies Inc. All Rights Reserved. Simba Technologies and the Simba logo are trademarks of Simba Technologies Inc. All other trademarks or servicemarks are the property of their respective owners.