



## Tamino and WebSphere Integrated for E-Business Success

Tamino XML Server provides optimized storage, maintenance, publishing, and exchange of XML documents. Its highly efficient native XML storage and query functionalities have been integrated with IBM's WebSphere Application Server for deploying e-business applications where scalability, high performance, and a broad set of capabilities are required. IBM Global Services is reselling Tamino and has added it to its WebSphere professional services practice.

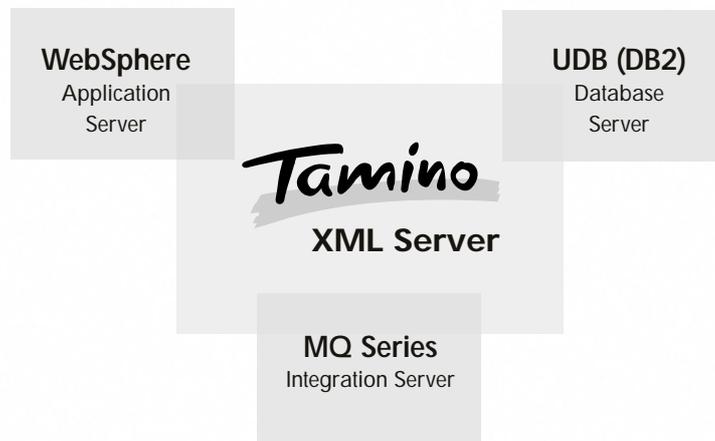
### PARTNERSHIP AT A GLANCE

Developing and deploying applications using WebSphere and Tamino allows organizations to take full advantage of the promise of XML while extending the life of their legacy applications by making them productive participants in e-business. Tamino XML Server works in partnership with DB2 and other relational databases to provide WebSphere-based applications with rapid access to both structured legacy data and rich new unstructured content captured in XML.

### TAMINO/WEBSHERE BENEFITS

The advantages of combining Tamino XML Server and WebSphere can be easily illustrated using a common e-business example – Web-enabling legacy systems so that users can retrieve and add new data via the Web. For these kinds of applications, Tamino/WebSphere offers benefits in three major areas: Web publishing, rich content, and transaction integrity.

Tamino XML Server can cache data from legacy systems in XML for



rapid publishing on the Web. The ability of Tamino to work closely with WebSphere and major databases such as DB2 provides a number of options to keep the cached data current.

Users are looking for much more content than just what is available from existing databases. Examples include product specifications, pictures, engineering drawings, parts lists, and online user manuals. All this data can be stored in Tamino. Because the data is in XML, users can get the relevant data they are looking for. Rich XML content also makes it easy to publish data to different destinations (devices) for different purposes.

Businesses use documents as a means of ensuring transaction integrity. A purchase order document shows what products were ordered, quantity and at what price. However, users entering an order via the Web do not have the same transaction integrity. Tamino XML Server keeps every XML transaction document in its native form so there is a source document of record in cases of dispute.

In addition to the simple example above, Tamino XML Server can provide WebSphere-based applications with rapid access to XML data for a broad range of other services including:



- Web Services
- Publishing Services
- Repurposing Services
- Transformation Services
- Replication Services

### TAMINO ARCHITECTURE

An XML server is used to perform two basic functions: dynamic data translation and XML storage. An XML server can work in partnership with an app server such as WebSphere. The app server makes a request for data and the XML server handles the specifics of XML to find the desired data and returns it in the appropriate format.

Tamino XML Server is a technology breakthrough. It is a native XML server that was designed to manage data formatted according to the XML standards defined by the World Wide Web Consortium (W3C). XML data structure is defined by a Document Type Definition (DTD) or Schema and is predominantly hierarchical in its nature. A native XML server is built to manage hierarchical structures compared to a relational database, which is limited to table structures.

Tamino XML Server is a complementary product to relational database servers like DB2. It is possible to store XML in a relational database using capabilities like DB2's XML Extender. However, using relational databases as XML repositories can be problematic.

- Decomposing data into multiple tables in an RDBMS and doing complex joins to recapture the data and rebuild the document puts a big performance load on the database.

- A native XML server maintains every e-business document exactly as it was received, including a digital signature if there was one. This preserves the transaction integrity in the event of business disputes. Breaking an XML document up into different tables in a database eliminates any document of record.

- Saving an entire XML document as a database CLOB or BLOB adds a significant full-text indexing load to access data in the document as well as the need to save and retrieve the complete document every time any piece of data in the document is needed.

- Using SQL to query XML data is very difficult, if not impossible. The XPath and upcoming XQuery standards are powerful alternatives.

XML can leverage and extend the life of legacy systems by allowing them to easily interact with new Web-based applications. Tamino supports this integration function with its X-Node and X-Tension capabilities.

Tamino has been purchased by over 500 companies and it is currently shipping on a broad range of platforms including: Windows NT, Windows 2000, AIX, Linux, and OS/390.

### WEBSHERE

The main purpose of an application server is to make it easier and faster to write robust, scalable, server-side applications. The term "app server" is becoming more and more synonymous with the

Java 2 Platform Enterprise Edition (J2EE) specifications. J2EE is a robust suite of middleware application services for server-side application development.

With the release of version 4.0, WebSphere provides a strong, cross-platform J2EE-compliant Web application platform that lets organizations deploy e-business applications and components, including Java servlets, JavaBeans, Java-Server Pages (JSP), and Enterprise Java Beans (EJBs).

### TAMINO/WEBSHERE INTEGRATION

Since its introduction a few years ago, EJB technology has gained momentum among enterprise development teams. Tamino XML Server APIs include EJB APIs that provide the integration between WebSphere and Tamino. Sample EJB code is available as well.

To get the full value of what WebSphere and Tamino can offer, you will need WebSphere v4.0 and Tamino v2.3 or subsequent versions.

**Software AG**  
**Corporate Headquarters**  
 Uhlandstraße 12  
 64297 Darmstadt/Germany  
 Tel: +49-61 51-92-0  
 Fax: +49-61 51-92-11 91  
[www.softwareag.com](http://www.softwareag.com)

**Software AG, Inc.**  
 11190 Sunrise Valley Drive  
 Reston, VA 20191-5424  
 USA  
 Tel: 703-860-5050  
 Fax: 703-391-6975  
 1 877 SAG 4XML  
[www.softwareagusa.com](http://www.softwareagusa.com)