

Successful Database Embedding in an Enterprise Application

Tired of counting on your client's IT infrastructure to support your application? Now, you may not have to.

For years, software vendors have relied on customer IT infrastructure, such as database licenses, installation, and administration expertise, to ensure effective and efficient use of their applications. Now, many database vendors, including Oracle, provide the opportunity for software vendors to seamlessly integrate database technology into their products or applications. With embedded software licenses, you can integrate database technology into your product or application and provide your customers with a turnkey solution.

About Xtivia

Xtivia is a global business and technology consulting firm that provides enterprise eBusiness solutions to leading corporations. Xtivia enables clients to utilize and leverage the most appropriate web-based technologies quickly and cost-effectively by utilizing Xtivia's experience, talent, and proven methodologies.

Since 1992, Xtivia has established a proven, global reputation as a company that delivers leading edge professional solutions to our clients' specific requirements regardless of the complexity of the projects. Xtivia's success has stemmed from a proven ability to deliver quality professional services, allowing the client to leverage the Web successfully, competitively, and profitably.

Xtivia works with many U.S. blue-chip companies, international organizations and medium-sized growth-oriented companies. We have delivered numerous solutions for some of the most respected and admired corporations and organizations throughout the world.

Why Embed?

- **Increase Your Sales Revenue:** Buy database software licenses at deep discounts, which allows you to increase margins and/or pass along savings to your customers.
- **Tap into New Markets:** Sell your product or application, with integrated database technology, to customers who have a limited budget and technical resources.
- **Value Add:** Simplify the solution for customers with a single technology stack offered by one vendor, and pass on the reduced cost for support, installation, and configuration.
- **Reduced Hassles:** Reduce hassles for you and your organization with control over which database technology to use and how to use it, as well as upgrades provided at your own pace.
- **Efficiency & Effectiveness:** Pre-configure the databases for optimal performance for your application, thereby eliminating the "application vs. database blame game."

Background

A major tax solution company approached Xtivia to help find a solution to eliminate the overhead of purchasing and installing third party database servers for customers using their enterprise application. Today, the application requires database software such as Oracle or SQL Server to be purchased and installed by each of their customers. The application installer creates the application database schema on a preinstalled and preconfigured database server.

The challenge was to create an enterprise installer that seamlessly installs the third party database server (Oracle 10G R2 Enterprise Edition), does appropriate configurations, and creates the application schema. The deployment needed to be easy and seamless, working well with the application installation process and conforming to existing standards. Additionally, the database configuration should be optimized to handle exponential growth in usage and data size. And, the day-to-day administration would need to be minimal since there would be either limited DBA expertise or no on-site DBA to manage the database.

Solution

A database solution was developed to embed an Oracle database with their enterprise application. This not only improved the bottom line for the company, but also added value to their customers by reducing costs, improving application performance, and removing the need to have a specialized skill set in house to manage the data and application.

Xtivia developed an installer utilizing InstallShield Multiplatform version 11 which is fully Java-compliant, thus allowing the same InstallShield project code to be utilized to create platform-specific launchers. The installer encapsulates the functionality of collecting user preferences and projected application usage in terms of transactions per day. The installer also allows users to choose the locations for database binaries, data and backups. The user can choose certain features provided by the database vendor (Oracle), making it a truly customizable, scalable and automated database installation with minimal day-to-day administration needs.

The following target platforms and database version were used:

Operating System

Windows 2003 Server Edition SP1

Red Hat Linux Enterprise ES 4

Database

Oracle 10G R2 Enterprise Edition/Oracle Instant Client 10G

Oracle 10G R2 Enterprise Edition/ Oracle Instant Client 10G

Xtivia developed the entire product, from requirements collection to user acceptance testing. The combined utilization of Oracle 10G R2 and InstallShield is fairly unique and as such, very little information is available about it. Despite this, Xtivia was able to deliver a high quality product with a substantial feature set, on time, using in-house talent. Some of the features made available by the installer are detailed below.

The installer collects information from the end user regarding the following items:

- Location for Oracle binaries
- Location for Data
- Location for Flashback recovery area
- Features such as RMAN, ASM and OFA
- Transaction volume per day

This information is then used to customize a silent Oracle database installation. The database is installed utilizing the locations specified by the user. Based on the database features selected by the end user, database configurations are performed silently as well.

The transaction volume specified by the end user is then used to configure and optimize various database parameters such as memory and disk space usage. Based on the transaction volume and standard growth equations, table spaces are created and CPU and memory resources are allocated.

The end user can install Oracle Instant Client along with a set of database maintenance utilities to facilitate the day-to-day management of the database if necessary. The user can use SQLPlus to connect to the databases and run queries. The Oracle Enterprise Manager web utility is also configured and ready to be used for easy access to all database administration functions and performance monitoring of the database.

Conclusion

With the product developed end-to-end by Xtivia, the tax solution company will now be able to reduce technical support hassles, increase revenue through additional sales and a broader offering that reaches more customers, and add value through a feature rich, fully optimized, automated, turn-key solution.

Xtivia's database embedding solution has effectively and efficiently delivered a strategic business advantage to this customer. Call Xtivia now to find out how you can use database embedding technology to increase revenue and add value for your clients.



For more information on how Xtivia can help your organization better manage its IT services, please contact an office near you or visit our web site at www.Xtivia.com.

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