

JNBRIDGE™

Spanning Java and .NET

Challenge:

Move a large call center application from a variety of proprietary interfaces to an integrated VB .NET front end solution with synchronous communications to a BEA WebLogic Server integration hub.

Solution:

Use JNBridgePro to handle the high speed interoperability, including “pushed” information to the VB .NET front end via the JNBridgePro callback mechanism. Use the exception handling and collection class mapping functionality of JNBridgePro for ease of implementation and architectural benefit.

Results:

The call-center customer is very happy and the application has been deployed for six months. Use of JNBridgePro helped e-CC Development retain one more satisfied customer.

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“We attempted to use CORBA products for our Java/.NET interoperability needs but they did not support server-based callbacks plus the implementation was difficult. JNBridgePro supported the connectivity that we required and using the callback mechanism of JNBridgePro, we were able to successfully complete the project.”

***- Tony Shrader
President
e-CC Development***

JNBRIDGEPRO SUCCESS STORY

e-CC Development Creates Large-Scale Call Center Application with JNBridgePro

e-CC Development was contracted to design and develop a back office integration solution for a large call center client. The goal of the project was to create a back office integration application that would tie all the required back office systems together into a single point of connection for a new “unified” desktop application. The interoperability challenge was the requirement that the desktop application be written in Visual Basic .NET while the backend integration hub was to be a J2EE application.

Project Goal

The goal of the project was to replace numerous disconnected desktop interfaces with a single front-end application. The client wanted to take advantage of the features available to a desktop application written in VB.NET, including a rich presentation, ease-of-use, and continued supportability. However, much of the existing back-office infrastructure was already using J2EE, and the new Computer Telephony Integration Hub needed to use the BEA WebLogic Server platform. Therefore, the immediate issue was the interoperability between the VB.NET desktop application and the J2EE integration hub environment. This issue was further exacerbated by the additional requirement that the desktop application act as a computer-telephony “screen pop”, where each desktop needed to receive unsolicited “pushed” messages from the server.

Evaluation

e-CC Development investigated several technologies, including Java/COM interop products, CORBA, Web services, and Java/.NET bridges. Java/COM bridges also were considered but a native .Net Remoting solution was preferred over older COM technology for its flexibility and supportability. Implementing CORBA communications proved to be very difficult and time consuming. Some crucial functionality, such as callbacks, was never able to be implemented within the evaluation time constraints. Web services were also considered as an interoperability solution between the .NET and J2EE applications. However, Web services do not easily allow for stateful connections nor do they allow unsolicited “push” messages via a callback or other mechanism. Additionally, the performance hit of using Web services was unacceptable.

Multiple Java/.NET bridging products were evaluated. After a very short time, it became clear that JNBridgePro offered the best combination of technical features, ease of use, and price. A quick

After performing our evaluation tests, it became clear that JNBridgePro stood out as the best Java to .NET interoperability solution.

**- Tony Fox
e-CC Development**

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JNBridge supplies software developers with a full line of Java/.NET interoperability tools that enable fast and seamless integration of pure Java code with Microsoft .NET components and applications. JNBridgePro offers full two-way interoperability between Java and .NET with an easy to use proxy generating tool. JNBridge's customers include ISVs, system integrators, financial institutions, and healthcare solution providers.



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e-CC Development specializes in high-quality contact center products that improve the productivity and quality of contact centers by integrating back office, voice systems, and agent desktop applications. The e-CC Development solution provides call center agent's an integrated solution to all of the systems that they interact with: CTI (phone systems), email, legacy databases while providing work flow management of the back office activities.

prototype was developed that used callbacks and the collection class mapping functionality of JNBridgePro. The use of these two technical features saved much time and effort on the part of e-CC Development staff. JNBridgePro also proved to be the easiest to implement both on the J2EE server side as well as the VB .NET client side. The user interface was intuitive and easy to use. The evaluation went smoothly, and within a few days of downloading the trial version of the product, e-CC Development was able to perform all the necessary evaluation tests and make the decision to go with JNBridgePro.

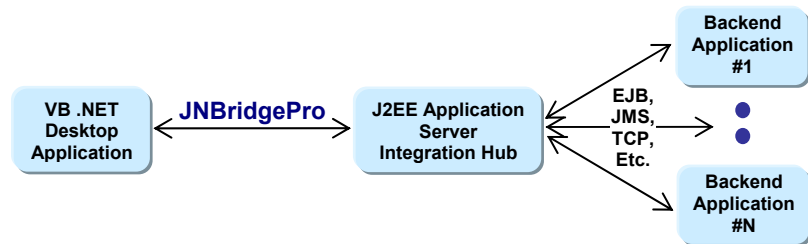


Figure 1. Basic Architecture

Implementation

As shown in Figure 1, JNBridgePro was used to connect the VB.NET desktop application with the J2EE integration hub. The use of JNBridgePro proved to be invaluable tool for Java/.NET interoperability during the implementation process. Initial evaluations of callbacks and cross platform exception handling set the stage for the continued use of this functionality during the development process. Regenerating proxies during the build process proved to be almost effortless using the command line version of the proxy generation tool. Deploying the proxy application as a Web Archive (WAR) on the J2EE server removed the need for an extra Java proxy application on the client desktop, as was the case in some other solutions. This meant that the client application could simply include a JNBridgePro generated .NET proxy assembly into the application and be packaged and deployed as an entirely standard native .NET application.

Conclusion

The technical superiority of JNBridgePro made the implementation of the solution very straightforward. "The call center software project proceeded very smoothly in large part because of the quality of the software from JNBridge. Our customer is very happy and we expect to use JNBridgePro in the future when Java/.NET interoperability is necessary" said Tony Shrader, President, e-CC Development.