IBM

LexiGuard keeps data secure for companies worldwide

Highlights

LexiGuard™ provides businesses with an easy-to-use, affordable data security application that uses advanced encryption technology, as well as digital certificates and signatures. Developed by New York-based Lexias Inc., LexiGuard is Java®-based for maximum flexibility, interoperability, and ease of integration. Running on the IBM WebSphere™ Application Server and IBM DB2® Universal Database™, LexiGuard was successfully tested on the IBM RS/6000® and Netfinity® platforms at the IBM Solution Partnership Center, becoming the 1000th Netfinity ServerProven™ application and the first Linux validation.

Imagine a company with a limited budget that needs to e-mail highly confidential financial plans to investors. Most likely, that company does not have a Virtual Private Network (VPN) installed. VPNs are often costly, complex, and can be difficult to deploy without expert help. How can such a company ensure that its data is transmitted securely over the Internet? Lexias thinks it has the answer.

Based in New York, Lexias, Inc., has developed LexiGuard, an affordable, user-friendly encryption application for laptop, desktop, and client/server environments. "We developed LexiGuard software because we recognized that businesses needed an easy-to-use security solution," explains Kuo Hsieh, CEO of Lexias. "Our technology is completely transparent to users, so they do not need any knowledge of network engineering to begin sending encrypted data over the Internet. In this way, customers can benefit from encryption technology, while avoiding the intricacies or costs associated with VPNs."

LexiGuard encrypts data for maximum security

LexiGuard uses encryption technology to help keep information safe while it is in transit over public networks and while it is stored on servers and hard drives. The original text, or plain text, is converted into a coded equivalent using an encryption algorithm with a binary number key. The greater the number of bits in the key, the more possible key combinations and the longer it would take to break the code. LexiGuard currently uses an RSA encryption level of 1024 bits for the key. In addition, LexiGuard generates its own encryption key pair for user verification.

LexiGuard employs public-key cryptography, which uses both a private and a public key. Each recipient has a private key that is kept secret and a public key that is published for everyone. The sender looks up the recipient's public key and uses it to encrypt the message. The recipient uses the private key to decrypt the message. Owners never need to transmit their private keys to anyone in order to have their messages decrypted. Thus the private keys are not in transit and are not vulnerable.

Java-based architecture provides easy integration and flexibility

Lexias made several strategic decisions while developing LexiGuard. To provide customers maximum interoperability, Lexias built the application using Java. Moreover, Lexias designed LexiGuard to run on a specific application server: IBM WebSphere. "We selected IBM WebSphere over other application

servers because it offered us the ability—and opportunity—to run LexiGuard on all IBM platforms without having to rewrite our code," says Hsieh. "That way, any e-business running IBM WebSphere would be able to drop in our product and immediately have it run on both their IBM and non-IBM servers."

LexiGuard confirms interoperability with IBM Netfinity and RS/6000 platforms

Earlier this year, Lexias decided to test its software at the IBM Solution Partnership Center (SPC) to confirm its interoperability with IBM platforms. At the SPC in Waltham, Massachusetts, Lexias ran LexiGuard on IBM WebSphere, while successfully testing it on the IBM RS/6000 and validating the application in the Netfinity ServerProven program. LexiGuard also became the first Linux® electronic validation at the SPC.

The Netfinity ServerProven program provides developers the opportunity to test their business solutions on a comprehensive range of Netfinity servers in real-world environments. The IBM Netfinity system environment provides the scalability to handle a wide range of applications, as well as the strong performance and high availability needed to proactively manage systems. It also is the only Intel® processor-based server that includes a complete e-business solution at no additional cost. IBM offers Netfinity ServerProven testing at many full-service SPCs worldwide. Additional information is available at: http://www.developer.ibm.com/welcome/netfinity.

Likewise, the RS/6000 server family is designed to support a broad range of applications. This highly scalable family includes enterprise servers, workgroup servers, and workstations. Uniprocessor and symmetric multiprocessor (SMP) server models are well suited for mission-critical commercial, large e-business, and numeric-intensive environments.

LexiGuard integrates seamlessly with IBM DB2

At the SPC, Hsieh also confirmed that LexiGuard's interfaces would integrate easily with the IBM DB2 Universal Database. A multimedia, Internet-ready relational database management system, DB2 supports Java and integration with the IBM WebSphere Application Server. It also enables developers to design a range of e-business applications. "Because DB2 is widely used by e-businesses worldwide, on IBM and non-IBM platforms alike, we wanted to ensure that our interface functioned seamlessly with it," explains Hsieh. "Our customers now have the assurance that they can easily use IBM DB2 with LexiGuard. In addition, DB2—like WebSphere—provides LexiGuard customers with excellent cross-platform functionality, along with the reliability and scalability IBM products are known for."

SPC testing gives LexiGuard an edge in the marketplace

Hsieh notes that testing at the SPC provides LexiGuard with the credibility it needs to support claims of wide-scale interoperability. "Even though our solution is Java-based and in theory should be cross-platform, we now can confidently tell our customers that it works extremely well on Windows NT®, Linux, and AIX®." Hsieh adds that he thinks the SPC testing will boost marketing efforts for LexiGuard. "Since IBM is considered a leader in the industry, I think having SPC validation will give LexiGuard a definite edge in the marketplace."

The Solution Partnership Centers are one of the many benefits of PartnerWorld for Developers, a program for software developers who build solutions using IBM technologies. The program helps developers reach broader markets, lower their costs, and get products to market faster. Developers can take advantage of no-charge software and tools, hardware discounts and leases, extensive online technical support, cross-platform porting and testing facilities, marketing vehicles that reach a global audience, and more. To join at no charge, visit http://www.developer.ibm.com.