THE KORPER AND ELLIS E-COMMERCE BOOKS SERIES

Enterprise Directory & Security Implementation Guide

DESIGNING & IMPLEMENTING DIRECTORIES IN YOUR ORGANIZATION

Charles Carrington | Timothy Speed | Juanita Ellis | Steffano Korper

ENTERPRISE DIRECTORY AND SECURITY IMPLEMENTATION GUIDE

A Volume in The Korper and Ellis E-Commerce Books Series

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To Rolinda Carrington-Rhone, Callie Rose Carrington and Miles Ellis Carrington

Charles Carrington

To Linda Speed, really *still my favorite wife*

Timothy Speed

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Foreword

A customer stumbling upon this book in a bookstore might ask, "Why is a book on directories and security is so important?"

The Internet is connecting enterprises into a global economy, and the interaction of directories is critical to the success of the New Economy. Consider, for example, Internet commerce in the United States. According to a January, 2002 report from the Pew Internet & American Life Project (http://www.pewinternet.org), overall, 29 million American shoppers bought gifts online during the 2001 holiday season, spending an average of $392, up from $330 last year. A quarter of all U.S. Internet users did some of their buying online this year, versus a fifth of them last year. If Web-based retailers could not offer secure Web Services, then consumers would not feel safe on the Internet. As with any venture, security is as important as the venture itself. In order to communicate with the outside world, a company may need to securely publish part of their directory. This has certain risks and benefits: If a company's directory structure were compromised, the entire enterprise could be at risk.

Today, we live in a world of Internet technologies: messaging services, e-business enterprises, business-to-business value chain integrations, and now Web Services. The state-of-the-art value chain is now executed through both intranets and extranets. More and more of most companies' internal employee support systems (employee-initiated activities, such as registering for the company medical package, making a change to a personnel record, requesting help, etc.) are based on Internet technologies.

Consider, for a moment, all of the companies and workers on these intranets. The Internet is not just one network, but thousands of individual networks. These networks are most commonly connected by the TCP/IP network protocol, which provides the base communications for the information highway. Now a person may ask, "How does someone navigate through these networks?" The answer is, through *directories*.

Directories provide the road maps to the Internet. In most cases, each network has one or more directories. One of the best examples of these directories is the Internet Domain Name System (DNS). Directories, including

DNS, take the Internet from a series of numbers and protocols to actual names and locations. Consider, for example, the simple process of ordering a product from your favorite Web vendor and the directories that could be used in the transaction:

- A customer opens a URL to order a product (DNS directory used).
- A product is selected and submitted to a processing system (Internal routing directories used, such as server names, database names, and mail-in-services).
- The customer receives confirmation of the order (e-mail directories used, from both the vendor and consumer).
- The product is shipped to the customer (messages sent to a service vendor for delivery).

Many different directories could be used and accessed in any given transaction. If a hacker was able to gain access and make changes to these directories, e-mail addresses could be changed, messages could be routed to other sites, product deliveries could be rerouted, and servers could be impersonated. Businesses would not bring their wares to the Internet and customers would not want to do transactions there. The viability of the Internet itself would be called into question. Directory security is essential to business on the Internet.

The next iteration in today's Internet technologies is Web Services. This technology provides a mechanism that allows for the growth of network-based applications. Some of these Web Services include:

- UDDI—Universal Description Discovery and Integration
- SOAP—Simple Object Access Protocol
- WSDL—Web Services Description Language

These new technologies will provide the framework for application-to-application communications. Some of the parts directories will play in these new technologies include:

- Customer information
- Vendor information
- E-mail addresses
- Application registration

This book is aimed at providing the reader with the information needed to support and protect an *enterprise directory*. The authors understand that the primary objective of any business is to run a business and not just

to install a security system. They emphasize the practical and pragmatic approaches to securing any Internet enabled business. This includes the directories services, authentication, and authorization.

Take the time to read this book, which gives the IT professional the information and tools needed to secure one of the most valuable network resources in the enterprise: The organization's directory.

Al Zollar
General Manager
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Al Zollar is responsible for the executive leadership of Lotus software. This includes overall strategy and day-to-day management of Lotus as a brand and a business within IBM. Lotus software is an established industry leader, empowering our customers to leverage their human capital through communications, advanced collaboration, and e-learning offerings to "enable the minds of e-business." Al oversees a worldwide organization that markets its products in over 80 countries.

Prior to joining the Lotus team, Al served as general manager of IBM's Network Computing Software Division, responsible for key internet infrastructure technologies, including networking, directory, security and Java technologies.

Since joining IBM in 1977 as a systems engineer trainee in San Francisco, Al has held several high-level positions within the company including senior management positions in every IBM Software Group division. He has served as general manager of IBM eNetwork software, senior vice president of development for IBM Tivoli software, and has held numerous key-management positions in IBM software development laboratories, including lab director for IBM Software Group in Raleigh, North Carolina, and DB2 Product Manager, Santa Teresa, California.

Most recently, Al was appointed to the Executive Committee of the Greater Boston Chamber of Commerce and is a board member of the Chubb Corporation. Additionally, Al is an advocate and supporter of business and community-based organizations aimed at expanding opportunities for minorities. He is a board member of the Executive Leadership Council, a co-chair of the IBM Black Family Technology Awareness project, and past member of the Durham, North Carolina Black Achievers Program Advisory Board. Al's also a member of the Leadership Council of the Center for Business and Government at the John F. Kennedy School for Government of Harvard University.

Al holds a master's degree in Applied Mathematics from the University of California at San Diego. He spends his free time with his family, reading, playing golf and listening to jazz.