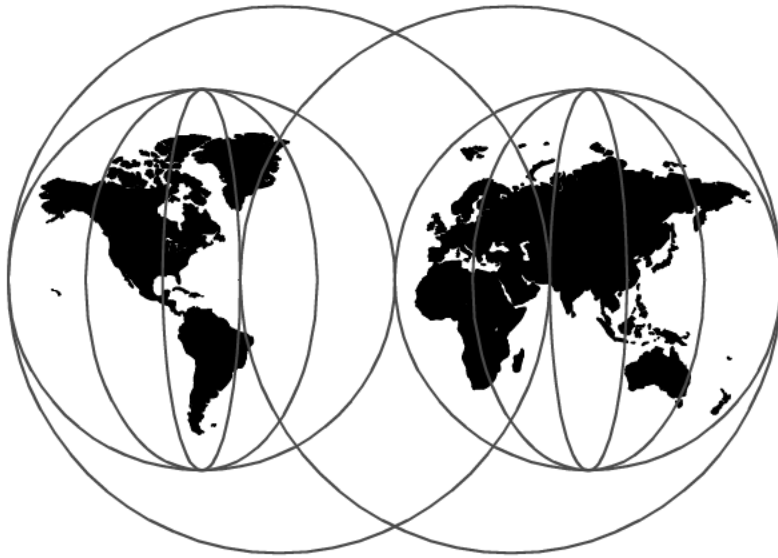


Understanding LDAP

Heinz Johner, Larry Brown, Franz-Stefan Hinner, Wolfgang Reis, Johan Westman



International Technical Support Organization

<http://www.redbooks.ibm.com>

SG24-4986-00



International Technical Support Organization

Understanding LDAP

June 1998

Take Note!

Before using this information and the product it supports, be sure to read the general information in Appendix D, "Special Notices" on page 161.

First Edition (June 1998)

Comments may be addressed to:
IBM Corporation, International Technical Support Organization
Dept. JN9B Building 045 Internal Zip 2834
11400 Burnet Road
Austin, Texas 78758-3493

When you send information to IBM, you grant IBM a non-exclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© **Copyright International Business Machines Corporation 1998. All rights reserved**

Note to U.S Government Users – Documentation related to restricted rights – Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract with IBM Corp.

Contents

| | |
|---|-----|
| Figures | vii |
| Tables | ix |
| Preface | xi |
| The Team That Wrote This Redbook | xi |
| Comments Welcome | xii |
| Chapter 1. LDAP: The New Common Directory | 1 |
| 1.1 What is a Directory? | 2 |
| 1.1.1 Differences Between Directories and Databases | 2 |
| 1.1.2 Directory Clients and Servers | 4 |
| 1.1.3 Distributed Directories | 6 |
| 1.1.4 Directory Security | 7 |
| 1.2 The Directory as Infrastructure | 8 |
| 1.2.1 Directory-Enabled Applications | 8 |
| 1.2.2 The Benefits of a Common Directory | 9 |
| 1.3 LDAP History and Standards | 10 |
| 1.3.1 OSI and the Internet | 10 |
| 1.3.2 X.500: The Directory Service Standard | 11 |
| 1.3.3 LDAP: Lightweight Access to X.500 | 12 |
| 1.4 LDAP: Protocol or Directory? | 14 |
| 1.5 The LDAP Road Map | 15 |
| 1.6 The Quick Start: A Public LDAP Example | 16 |
| Chapter 2. LDAP Concepts and Architecture | 19 |
| 2.1 Overview of LDAP Architecture | 19 |
| 2.2 The LDAP Models | 24 |
| 2.2.1 The Information Model | 25 |
| 2.2.2 The Naming Model | 28 |
| 2.2.3 The Functional Model | 35 |
| 2.2.4 The Security Model | 42 |
| 2.3 Security | 43 |
| 2.3.1 No Authentication | 44 |
| 2.3.2 Basic Authentication | 44 |
| 2.3.3 Simple Authentication and Security Layer (SASL) | 45 |
| 2.4 Manageability | 49 |
| 2.4.1 LDAP Command Line Tools | 50 |
| 2.4.2 LDAP Data Interchange Format (LDIF) | 50 |
| 2.5 Platform Support | 56 |

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.