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ISPadmin

Service Provider Book Reviews II

In this edition of ISPadmin, I review two new books that are of interest to most in the service provider business and many in the field of information technology. (No, I am not going to turn this column into a book review column; I promise these are my last book reviews for a while!)

In the interests of full disclosure, I must state that I was paid to evaluate the manuscript of *LDAP System Administration*. However, I purchased both of the books reviewed (even with my complimentary copy of the LDAP book!).

LDAP System Administration

You might already be asking yourself, "Why would anyone write a book on LDAP when a major author of the protocol (Tim Howes) has already written a book on it?" While there is nothing wrong with the Howes et al. book, it is not "hands-on" enough to be useful for everyone. It covers the theory very well, leaving most of the implementation as an "exercise for the reader." That's where the O'Reilly book is different.

One of the issues with many open source projects is the lack of high-quality documentation to go along with the project. This book is very close to what I would have wanted to produce if I were to write a book on LDAP. Gerald Carter has created an outstanding, well-rounded reference for the OpenLDAP 2.x server, covering enough LDAP basics to enable most system administrators to complete their (LDAP-related) tasks with minimal overhead. If what you are looking for is a protocol reference, then the Howes book will do the trick. However, if you are looking for an LDAP nuts-and-bolts "how to" manual, then the O'Reilly book is what you need.

The book's first section ("LDAP Basics") lays down the necessary theory a typical system administrator needs to know to be able to implement an LDAP-based project. It does an acceptable job of building a foundation from which to base the second section of the book ("Application Integration"). It is by no means an in-depth reference, nor is it intended to be.

The example chapter in this section (Chapter 4: "Building a Company White Pages") does an adequate job of tying the pieces together, though it also exemplifies the "out of order–ness" of some aspects of the book. It would have made more sense to have chapter 5, "Replication, Referrals, Searching, and SASL Explained," come before the example chapter, which, it seems to me, should come last and tie everything in the section together. The book contains other organizational missteps, but these qualify as annoyances more than substantive flaws.

The second section is where this book really shines. The integration of LDAP into applications is much needed coverage for those administrators who like the "cookbook" format. Chapter 6, "Replacing NIS," is an excellent tutorial on how one could use LDAP to handle authentication for a large group of users, either from an existing NIS infrastructure or from scratch. Chapter 7, "Email and LDAP," does a fine job covering integrating mail clients and servers with LDAP. Chapter 8, "Standard UNIX Services and LDAP" excellently explains how to integrate LDAP with Apache, ProFTPD, Samba, FreeRADIUS, BIND 9, and printers.

Chapter 9, "LDAP Interoperability," addresses the issues surrounding LDAP's integration with other types of directory servers such as Microsoft Active Directory and Kerberos. Finally, no book with "System Administration" in the title would be complete without some sort of Perl coverage, and Chapter 10 nicely documents the "Net::LDAP" Perl module. The book contains five appendixes, the most useful being Appendix B,

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SYSADMIN

which contains the OpenLDAP command options. Anyone who has searched through the sources to find the debug levels will appreciate this appendix.

So what's not to like about this book? Not much. Some might object to the "light" theory coverage, but that is a plus in my estimation. The only minor thing missing would be in-depth coverage of the more useful Web-based LDAP browsers/editors available; the single-page coverage here is insufficient in, my opinion.

RADIUS

I was very pleased to see a book on RADIUS finally; it's about time something was published on this topic, though I can understand publishers' reluctance to bring out books in such a limited subject area.

After presenting a good overview of the theory behind RADIUS, the book describes such RFC material (though more accessibly) as packet types, TCP vs. UDP, attribute/value pairs, authentication methods, and realms. Chapter 3 describes authentication and authorization attribute properties and seems to focus on the "Livingston" variant of the standard dictionary, with no coverage of the slight differences in the "Merit" type of dictionaries. This seems like a significant omission, since these slight differences have caused me great headache in the past. Also, no coverage of vendor-specific attribute properties is available, nor of the de facto entries such as those on Ascend.

Chapter 5 is where the FreeRADIUS server coverage begins. The documentation that now ships with FreeRADIUS tells you to use replacement configuration files, which renders obsolete those described in this book! In addition, the entries describing the new format files are incomplete. Chapters 6 and 7 function as catch-all chapters; topics include PAM, proxying, working with particular RAS gear, using MySQL to authenticate (but not for RADIUS accounting), Web authentication, LDAP (this should have had its own chapter), and processing RADIUS accounting records with RadiusReport.

Chapter 8 provides a nice treatment of RADIUS's security issues, and what (little) can be done about them. Chapter 9 describes some of the more widely used RADIUS-related draft standards, including VPN tunnels, the Extensible Authentication Protocol, and interim accounting. Again, there isn't anything here that one cannot get out of the draft RFCs, it's just a little easier to read and understand. Chapter 10, "Deployment Techniques," covers deployment from a broad high-level view but doesn't get into enough detail. Such topics as scaling and switching were omitted, and I found the "case studies" a little too contrived for my liking.

A number of relevant topics are missing from this book. How about some concrete example configurations? (I am a big fan of the cookbook approach.) For example, I wanted to set up a RADIUS proxy environment, but this book was not helpful in my research. There is also no discussion of such basic RADIUS-related Perl modules as perl-RADIUS, and treatment of RADIUS's application to authentication problems is limited. Why not detail how to set up a news server that authenticates via RADIUS, or how to perform wireless authentication via RADIUS?

The book's primary weaknesses – not enough detail and spotty coverage of important topics – are magnified by the fact that FreeRADIUS has evolved significantly since this book was written. Despite its numerous shortcomings, this is currently the only book on RADIUS that I am aware of, so if you have RADIUS and want a reference, this will have to do. Perhaps O'Reilly will publish a second edition after the FreeRADIUS has moved past its current active-development phase, so that some of the book's more glaring deficiencies can be corrected.

Next time, I will take a look at the ISPman LDAP-based software for providing and provisioning ISP-type services. In the meantime, please send me your questions and comments!