Kerberos: The Definitive Guide
Kerberos, the single sign-on authentication system originally developed at MIT, deserves its name. It's a faithful watchdog that keeps intruders out of your networks. But it has been equally fierce to system administrators, for whom the complexity of Kerberos is legendary. Single sign-on is the holy grail of network administration, and Kerberos is the only game in town. Microsoft, by integrating Kerberos into Active Directory in Windows 2000 and 2003, has extended the reach of Kerberos to all networks large or small. Kerberos makes your network more secure and more convenient for users by providing a single authentication system that works across the entire network. One username; one password; one login is all you need. Fortunately, help for administrators is on the way. Kerberos: The Definitive Guide shows you how to implement Kerberos for secure authentication. In addition to covering the basic principles behind cryptographic authentication, it covers everything from basic installation to advanced topics like cross-realm authentication, defending against attacks on Kerberos, and troubleshooting. In addition to covering Microsoft's Active Directory implementation, Kerberos: The Definitive Guide covers both major implementations of Kerberos for Unix and Linux: MIT and Heimdal. It shows you how to set up Mac OS X as a Kerberos client. The book also covers both versions of the Kerberos protocol that are still in use: Kerberos 4 (now obsolete) and Kerberos 5, paying special attention to the integration between the different protocols, and between Unix and Windows implementations. If you've been avoiding Kerberos because it's confusing and poorly documented, it's time to get on board! This book shows you how to put Kerberos authentication to work on your Windows and Unix systems.

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I got started using Kerberos many moons ago, at my university. This is probably how many people got to know about it. While I didn’t use it very much, it’s there that I learned the basics and experimented a bit with Kerberos. Interest in it took off after Microsoft incorporated Kerberos authentication mechanisms into Windows 2000. Suddenly it wasn’t such arcane knowledge. Two open source Kerberos implementations exist, the MIT reference implementation, and the Heimdal Kerberos implementation. Even then, there are two main versions which you can find, Kerberos IV and Kerberos V. Kerberos IV went away for most environments with the passing of the Y2K mark, but some legacy apps need support. So, you still have to deal with it on occasion. In writing Secure Architectures with OpenBSD, I got a lot more intimate with Kerberos, and even set up a decently sized realm in my house. Hence, I got to experience the turmoil of setup and debugging. A book like Kerberos: The Definitive Guide (K:TDG) would have been very welcome. Instead, I slogged my way through it, and got it to work for the most part. K:TDG will help you set up your Kerberos world by introducing you to the complex subject, terminology, and the pieces. Once you learn the basics, you recognize that a simple realm is actually somewhat easy to set up. The author, Jason Garman, uses a mixed Mac OS X, UNIX, and Windows environment, focusing on UNIX most of the time. The bulk of the examples deal with MIT Kerberos 5 version 1.3 (krb5-1.3) but should work for most versions. Some attention is given to the Heimdal implementation (which is integrated with BSD, for example), and for the most part you’ll be OK. Windows examples are also pretty copious but always come second.

Like most O’Reilly titles, this book covers the general topics one needs to be conversant in a given topic. Take what you read, do a few web searches, experiment with the technology, discuss the concepts with others - this book will give you a solid foundation to get started. Moreover, like other O’Reilly topics one can see errata, etc. on the O’Reilly website. This book easily meets the high expectations one has of a book from this publisher: conversational tone, lots of hands-on examples, and broad coverage of applications using this technology. There are really two areas where this book falls short: 1) while broad and general concepts of Kerberos are discussed, when the examples roll out little effort is given to explain the reasons behind settings, configurations, etc., and 2) as with many technology-related books this book could already use an update. In terms of the former issue, I can see that it is difficult to cover the logic behind various implementations of
Kerberos. This book attempts to cover Kerberos implementations in Kerberos 4, Kerberos 5, MIT, Heimdal, Windows, and a bit of Mac OS X, as well as various applications that can use Kerberos such as Cyrus, OpenSSH, and Reflection. There is a lot of material here: each of these applications could easily warrant an O'Reilly book of their own. Moreover, these applications change over time (and rather short times, at that). Thus, the second complaint: particularly in terms of OS X this book could use an updated version, though the majority of the text is still relevant. To summarize a bit here, if you are looking for cutting-edge info on security, implementation (such as in OS X), or applications, then this book will fall a bit short.

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