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Security for cloud storage systems

[Yang K.](#), [Jia X.](#), Springer Publishing Company, Incorporated, New York, NY, 2014. 100 pp.
Type: Book (978-1-461478-72-0)

Date Reviewed: Jun 17 2014

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Over the course of four chapters, this book discusses security issues in cloud storage systems, and develops secure solutions to ensure data owners of the safety and security of data stored in the cloud. The aim of the book, as stated by the authors, is to provide a quick introduction to security for cloud storage.

Chapter 1 is an introduction to the book. It defines the cloud computing paradigm in general and cloud storage in particular. The second part of the introduction describes security issues in cloud storage.

Chapter 2 discusses a third-party storage auditing service, including a privacy-preserving auditing protocol and its correctness proof. The storage auditing protocol consists of three phases: owner initialization, confirmation auditing, and sampling auditing. A sampling auditing is conducted periodically to check data integrity. The correctness proof is presented in Section 2.3.4 and relies on the following theorem: "In the proposed auditing protocol, the server passes the audit if all the chosen data blocks and the data tags are correctly stored." The proof is presented in equation 2.2.

Chapter 3 presents attribute-based access control that achieves fine-grained access control based on an adapted ciphertext-policy attribute-based encryption (CP-ABE) approach. Chapter 4 extends the previous chapter by tackling the problem of data access control for multi-authority cloud storage. Overall, the three research chapters are well selected. The book, though not exhaustive, is a good introduction to the subject of security for cloud storage.

I recommend this book to anyone interested in securing cloud storage systems, though more research has to be taken into account when publishing the next edition. Indeed, cloud storage systems are becoming more and more popular, and therefore more research on security issues for these systems is being carried out.

Reviewer: [Ghita Kouadri Mostifaoui](#)

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