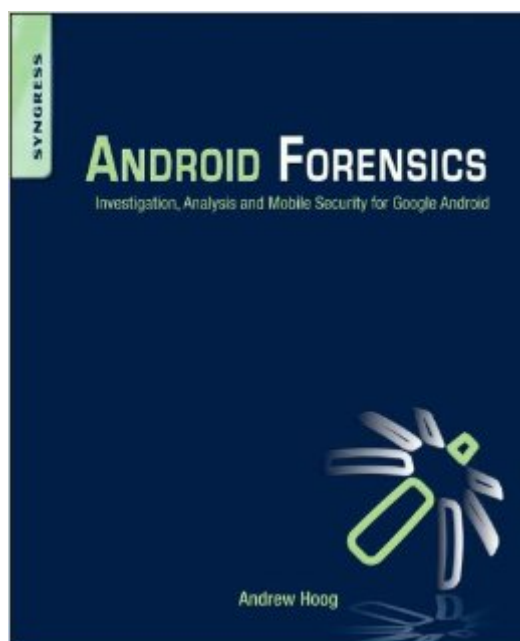# Android Forensics: Investigation, Analysis And Mobile Security For Google Android

Synopsis

Android Forensics: Investigation, Analysis, and Mobile Security for Google Android examines the Android mobile platform and shares techniques for the forensic acquisition and subsequent analysis of Android devices. Organized into seven chapters, the book looks at the history of the Android platform and its internationalization; it discusses the Android Open Source Project (AOSP) and the Android Market; it offers a brief tutorial on Linux and Android forensics; and it explains how to create an Ubuntu-based virtual machine (VM). The book also considers a wide array of Android-supported hardware and device types, the various Android releases, the Android software development kit (SDK), the Davlik VM, key components of Android security, and other fundamental concepts related to Android forensics, such as the Android debug bridge and the USB debugging setting. In addition, it analyzes how data are stored on an Android device and describes strategies and specific utilities that a forensic analyst or security engineer can use to analyze an acquired Android device. Core Android developers and manufacturers, app developers, corporate security officers, and anyone with limited forensic experience will find this book extremely useful.Named a 2011 Best Digital Forensics Book by InfoSec ReviewsAbility to forensically acquire Android devices using the techniques outlined in the bookDetailed information about Android applications needed for forensics investigationsImportant information about SQLite, a file based structured data storage relevant for both Android and many other platforms.

Book Information

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Customer Reviews

As Brian Carrier is to file system forensics and Harlan Carvey is to Windows registry analysis, Andrew Hoog is to the Android operating system. The level of detail in this book demonstrates a deep understanding of this complex and unique operating system. Chapter 1 begins with an overview of both Android and Linux in general. Instructions are provided for creating a virtual machine environment so the reader can follow along with the examples in the book. Throughout, the reader is encouraged to follow along, and ample opportunities are provided. This is highly appreciated as most technical books overwhelm the reader with information rather than guide them along the way. Chapter 2 presents an overview of the hardware that is supported by the Android OS. Chapter 3 begins the discussion of the Android OS proper. Included in this chapter are instructions on augmenting the previously created VM with the Android SDK providing additional tools for use in analysis. Chapter 4 is devoted to discussing the file systems likely to be encountered in the Android environment. Special attention is paid to YAFFS and YAFFS2. Chapter 5 discusses securing the data within the device. Also presented are recommendations for securely using Android devices in an enterprise environment. Additional advice is given for both users and developers to limit the exposure of sensitive data. Chapter 6 covers the most significant portion of the book with instructions on acquiring the data from device. Logical and physical acquisitions from the handset as well as the removable storage are discussed. The issue of passcode circumvention is discussed along with potential solutions. Chapter 7 finishes with timeline analysis techniques for the YAFFS file system and the FAT file system. Additional locations of interest to both security researchers and forensic analysts are also presented. Overall the book is enjoyable to read and will be a valuable asset for both forensic analysts and researchers.

One reviewer commented that code samples are unreadable for the Kindle version. That seems to be true for standard, small screen, non-color devices (i.e. classic Kindles). However, on my iPad Kindle app the code samples are fine. In fact you can unpinch them to zoom in, and rotate your device to portrait mode if needed. Also, the online Kindle Cloud Reader shows the code samples clearly. Hopefully future conversions of technical texts such as this one will be done with more care

to allow resizing of special text. For now you will need your PC with the free Cloud Reader, or some large screen tablet device to take advantage of this ebook.

Andrew Hoog has done an outstanding job presenting a complex topic that should interest not only advanced forensic practitioners but the typical Android Smartphone user as well. Highly recommended, whether its for work, or you want to know what "rooting" your Android phone actually does to the device.

A very well written book that contains Android essentials and advanced topics. Andrew Hoog does a great job explaining concepts and making even the most complex topics understandable. Highly recommended!

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