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Autore	Dang Bruce
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Execution Context; Kernel Synchronization Primitives; Lists
Implementation Details Walk-Through; Exercises; Asynchronous and Ad-Hoc Execution; System Threads; Work Items; Asynchronous Procedure Calls; Deferred Procedure Calls; Timers; Process and Thread Callbacks; Completion Routines; I/O Request Packets; Structure of a Driver; Entry Points; Driver and Device Objects; IRP Handling; A Common Mechanism for User-Kernel Communication; Miscellaneous System Mechanisms; Walk-Throughs; An x86 Rootkit; An x64 Rootkit; Next Steps; Exercises; Building Confidence and Solidifying Your Knowledge; Investigating and Extending Your Knowledge
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A Survey of Obfuscation Techniques The Nature of Obfuscation: A Motivating Example; Data-Based Obfuscations; Control-Based Obfuscation; Simultaneous Control-Flow and Data-Flow Obfuscation; Achieving Security by Obscurity; A Survey of Deobfuscation Techniques; The Nature of Deobfuscation: Transformation Inversion; Deobfuscation Tools; Practical Deobfuscation; Case Study; First Impressions; Analyzing Handlers Semantics; Symbolic Execution; Solving the Challenge; Final Thoughts; Exercises; Appendix Sample Names and Corresponding SHA1 Hashes; Index

Sommario/riassunto

Analyzing how hacks are done, so as to stop them in the future
Reverse engineering is the process of analyzing hardware or software and understanding it, without having access to the source code or design documents. Hackers are able to reverse engineer systems and exploit what they find with scary results. Now the good guys can use the same tools to thwart these threats. Practical Reverse Engineering goes under the hood of reverse engineering for security analysts, security engineers, and system programmers, so they can learn how to use these same processes to stop hacke